

Manufacturers Record

Exponent of America



\$6.50 per Year.
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Baltimore, Md.

NOVEMBER 9, 1922

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The Nation's Greatest Asset.

The time has come for this nation to understand that through the development of the resources of the South wealth could be created so rapidly within the next 25 years that this gain in national wealth would far exceed our total present indebtedness.

In the South is to be found a combination of natural advantages for varied resources in close proximity for development unmatched on earth. Here is a field for active upbuilding to which the financial and railroad and industrial interests of the country should bend every energy in order to turn these latent assets into living wealth.

Here is a field for expansion in industries, in town and city building, in the utilization of the as yet only partly utilized water powers in addition to what hydro-electric work has been done, in the utilization of the clays and the granites and the marbles, and the ores of one kind and another, sufficiently great to justify an expenditure not merely of hundreds of millions of dollars but literally of billions, which if wisely guided could be profitably invested for the good of the country.

In this superb region, with its variety of soil, climate and minerals, of sea coast, of proximity to the centers of population, there is to be found the nation's greatest asset, the development of which would enrich every part of this country. Every acre of land put under better cultivation, every water power developed, every cotton mill built, every coal mine opened, every other industry which can be established on a profitable basis, should be regarded by people of the North and West as the utilization of a national resource which would enrich them as well as the South. Indeed, the South is like a bank whose deposits are without limit, and upon which the nation can draw for an indefinite time and to any extent desired for the creation of employment and of wealth through the use of the limitless deposits of raw materials. Here are opportunities for the establishment of industries of every kind employing skilled labor, with a range of climatic conditions superior to those found anywhere else in the United States; for here is every variety of climate, from that of the semi-tropical of the South Atlantic and Gulf coast to that of the high mountain region of Virginia, the Carolinas, Georgia and Alabama, on out to Texas, which has the highest mountain peaks east of the Rockies.

If it were possible to arouse the entire nation to a realization of what are the potentialities of the South and what their full use would mean for the nation's progress and prosperity, we would soon see in the South a development of wealth for the good of the entire country surpassing that which was created after the Civil War by the building of transcontinental railroads and the opening of the great prairie regions, which made possible the feeding of the world.



Ask— your fire-chief your building inspector your conscience

Do you dare to be without an Asbestos Roof?

EVEN if you must think about price it has small bearing on this question. Asbestos Roofing is not expensive. For instance, our Flexstone Asbestos Shingles (slate surfaced) which are designed for the average home, cost but a fraction of a cent more per shingle than the ordinary rag-felt composition shingles.

And see what you get for this light extra cost. A fire-chief will tell you that you get fire-safety—a virtue that is common to all Johns-Manville Asbestos Roofings, either in shingle or roll form. Thousands of doubters on this point have been convinced by the famous Johns-Manville blow-torch test and by

the fact that these roofings are given highest ratings by Underwriters' Laboratories, Inc.

A building inspector will tell you that you get permanence, for Asbestos is not only fire-proof, but also rot-proof. Asbestos Roofings never need painting or refinishing or any other protective measures.

Finally, if you let your conscience decide, it will surely agree that you cannot give less than the protection of Asbestos to your home or to any structure on which your welfare or prosperity depends.

There is a Johns-Manville Asbestos Roofing either in shingle or roll form, for every type of building. (See chart on right.)

JOHNS-MANVILLE Inc., Madison Avenue at 41st Street, N. Y. C.

Branches in 56 Large Cities

For Canada: Canadian John's Manville Co., Ltd., Toronto

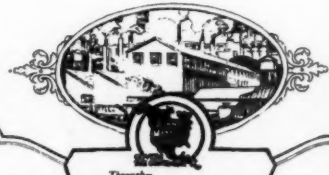
JOHNS-MANVILLE Asbestos Roofing



What Type of Asbestos Roofing?
This chart will help you decide

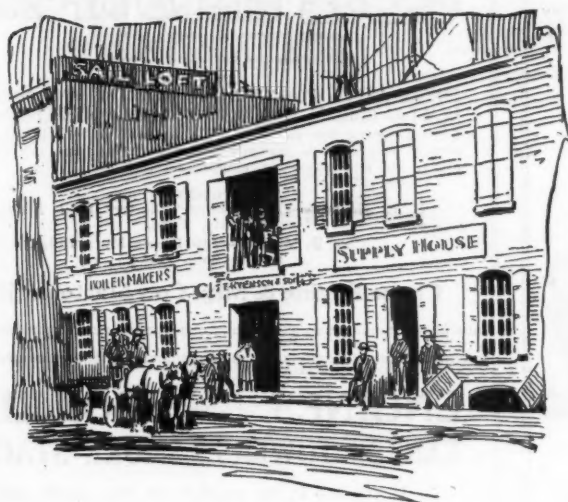
Kind of Building	Type of Asbestos Roofing	Brand or Trade Name
Small buildings	Slate surfaced roll roofing or shingles	Flexstone—red or green
Dwellings \$5,000-\$7,000	Slate surfaced roll roofing or shingles or rigid asbestos shingles	Flexstone—red or green, rigid—red, brown or gray
Dwellings \$7,000-\$25,000	Rigid asbestos shingles	Standard or extra thick—red, brown, gray or blended
Dwellings \$25,000 upwards	Rigid asbestos shingles	Colorblende—live-tane, brown with or without red or gray accidentals
Factories, shops and mills—Monitor and Sawtooth roofs*	3 or 4-ply ready roofing	Johns-Manville Asbestos Ready Roofing or Built-up Roofing
Flat roofs— all buildings*	Built-up roofing	Johns-Manville Built-up Roofing
Skeleton frame buildings—standard conditions*	Corrugated asbestos roofing with steel reinforcement	Johns-Manville Corrugated Asbestos Roofing
Skeleton frame buildings—excessive temperature or condensation conditions*	Corrugated asbestos roofing without steel reinforcement	Johns-Manville Transite Corrugated Asbestos Wood Roofing

*Note—Industrial buildings call for expert advice. A roofing expert is available at all Johns-Manville Branches.



Through
Asbestos

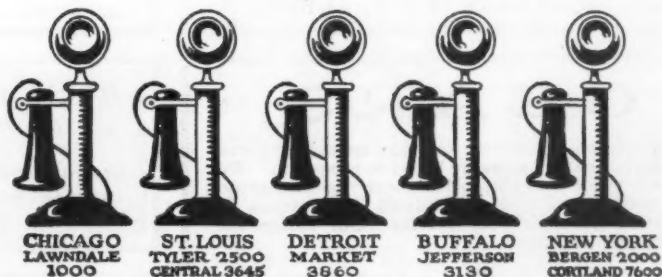
and its allied products
INSULATION
BRAKE LININGS
ROOFINGS
PACKINGS
CEMENTS
FIRE
PREVENTION
PRODUCTS



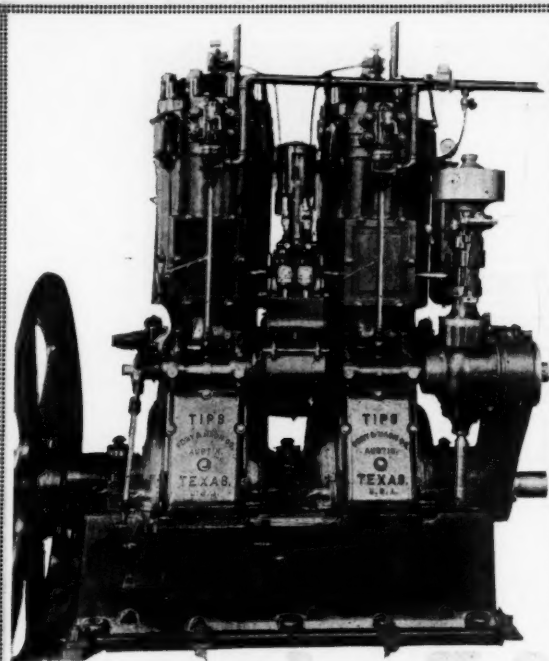
80 Years of Business

THIS month we celebrate our Eightieth Anniversary and call to mind the long period of progress between the first iron store and the national institution of today. It marks the fulfillment of eighty years of service and is concrete evidence of the soundness of the Steel-Service idea.

The five large Steel-Service Plants are themselves the demonstration of the confidence of the ever increasing host of customers and friends and stand as a measure of the value of Ryerson service to them.



RYERSON STEEL-SERVICE



TIPS SEMI-DIESEL OIL ENGINES

Sizes 35 to 165 H. P.

Full Chrome Vanadium Crankshafts are just another evidence of Tips honest engine construction.

TIPS FOUNDRY & MACHINE CO., Austin, Tex.

Manufacturers of



Dry Pans, (3 sizes).
Wet Pans, (3 sizes).
Sewer Pipe Presses, (4 sizes).
Gravity Elevators.
Sewer Pipe Dies.
Feeders.
Conveyors.
Potters Machinery.
Oat Cutters and Hullers.
Rubber Core and Mold Work.

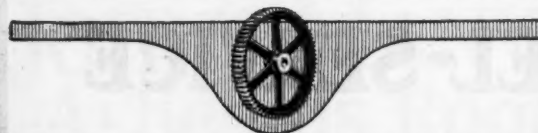
Send for Catalogue No. 31

TAPLIN-RICE-CLERKIN CO., AKRON, O.

GEARS

SMOOTH running; correct in design, accurate and true to pitch, Caldwell gears are bound to please you. We make all types—machine-molded, cut tooth, mortise gears, worm gears, etc. Caldwell promptness is traditional. It is at your service. Our stocks assure prompt shipment.

H. W. CALDWELL & SON CO. LINK-BELT COMPANY, OWNER
Dallas, Texas, 709 Main Street—Chicago, 17th Street and Western Ave.—New York, Woolworth Bldg.



CHUSE ENG. & MFG. CO.

MATTOON • ILL.

SINGLE VALVE, POPPET VALVE UNIFLOW, AND NON-RELEASING CORLISS ENGINES FOR YOUR POWER PLANT.

Built in sizes 100 to 1600 H.P. for rope drives, belting, or direct connection to saw mills, blowers, mine fans, generating units, air and ammonia compressors.

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Chuse Engine & Mfg. Co., Mattoon, Ill.

ENGINES BOILERS TANKS TOWERS SMOKE STACKS

If you are in the market for the above, get our prices. We are Southern Manufacturers, and not only manufacture, but guarantee our products. We want you to take advantage of our 50 years' experience.

Write us for further information
and become a satisfied customer.

SCHOFIELD'S IRON WORKS

Dept. H

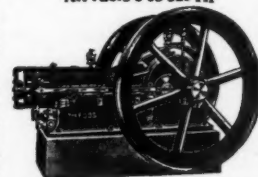
MACON, GA.

THE FOOS

A RUN FOR YOUR MONEY

All fuels 6 to 325 HP

It is a common thing to find a FOOS faithfully on the job delivering its full power rating after more than 20 years of continuous operation. We have record of many such installations. The highest quality materials obtainable plus master workmanship and 35 years' engineering experience, insures a good run for your money.



THE FOOS GAS ENGINE CO., SPRINGFIELD, OHIO

ALLIS-CHALMERS MFG. CO.

MILWAUKEE, WIS., U. S. A.

DESIGNERS AND BUILDERS OF

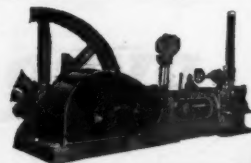
Steam Turbines, Electrical Machinery, Steam, Gas and Oil Engines, Centrifugal Pumps, Crushing & Cement Machinery, Etc.

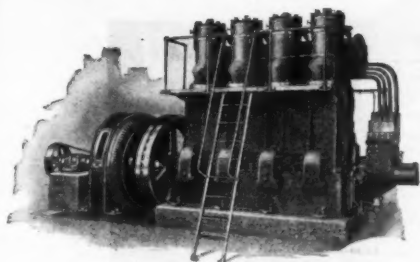
THE VILTER MFG. CO.

832 Clinton St.
MILWAUKEE, WIS.

Corliss Engines

Ice and Refrigerating
Machinery





Points of Excellence and Distinction

- A Diesel engine with typical slow graduated non-explosive combustion.
- Circulating forced feed lubrication for all main running parts.
- Stuffing box separating crank case and cylinder lubrication oil.
- Two part cylinder head preventing heat expansion stresses.
- No ignition devices, torches, hot metal or electric wires.
- No fouling of crank case lubricating oil by cylinder oil.
- Symmetrical cylinder heads and flat top pistons.
- No scavenging air in crank case.
- Burns any oil that flows.
- Low fuel oil consumption.
- No explosive shocks.

No Large Valves to Grind

There are no large valves to grind and keep tight in the Worthington Diesel Engine, two cycle—solid injection type. The only valves in the entire engine are a few checks which are just as easy to keep tight as quarter inch globe valves.

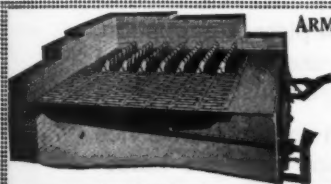
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WORTHINGTON PUMP AND MACHINERY CORPORATION

Executive Offices: 115 Broadway, New York City. Branch Offices in 24 Large Cities

W 151.4



ARMSTRONG INTERLOCKING SHAKING GRATES

cut fuel costs from ten to forty per cent.

—Prove it—
your plant—our expense
Armstrong Mfg. Company
W. Liberty Street
Springfield, Ohio

Fire Without Having A Cleaning Period On



For Use with Either Natural, Induced or Forced Draft
FOR DETAILED INFORMATION WRITE

THOMAS GRATE BAR COMPANY - BIRMINGHAM, ALA.

Yolande Coal & Coke Company

HIGH-GRADE 72 HOUR FOUNDRY COKE

WASHED and SIZED BLACKSMITH COAL

Mines and Ovens at Yolande, Ala.

General Office: Brown Marx Building
BIRMINGHAM, ALA.

Maintenance cost is low—

LUNKENHEIMER REGRINDING VALVES

have proved this true by the results they have given in every class of service, extending over a period of half a century.

The success of Lunkenheimer Regrinding Valves is determined and made certain by the Lunkenheimer method of manufacture, which provides a special bronze composition for each part, depending on the function the part performs, making the valves as near wear-proof as can be attained.

The Regrinding seating surfaces provide ready means for effecting repairs when necessary and at small cost.

Globe, Angle and Cross Valves, and Horizontal Angle, Vertical and Swing Check Valves for pressures up to 200 and 300 pounds.

Booklet 517-FB lists and describes the entire line. Shall we send you a copy?

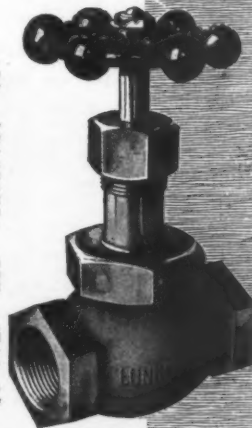


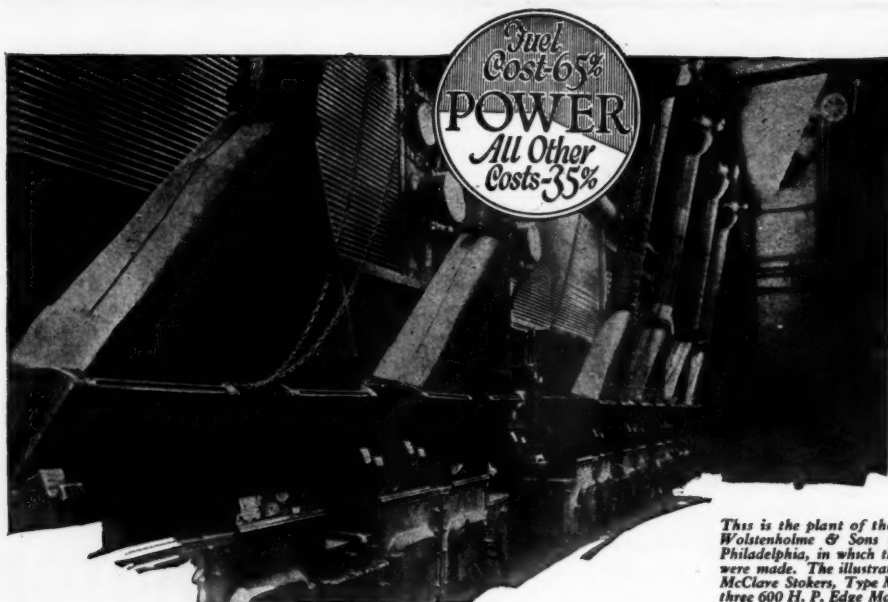
FIG 407

"America's Best since 1862"

THE LUNKENHEIMER CO.

—QUALITY—
LARGEST MANUFACTURERS OF
HIGH GRADE INDUSTRIAL SPECIFICATIONS
IN THE WORLD
NEW YORK CHICAGO CINCINNATI U.S.A. LONDON
EXPORT DEPT 128-129 LAFAVETTE ST. NEW YORK

3-25-22



This is the plant of the Thomas Wolstenholme & Sons Company, Philadelphia, in which the savings were made. The illustration shows McClave Stokers, Type MA, under three 600 H. P. Edge Moor Boilers



McClave-Brooks Company
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Chicago: 424 Hearst Building
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Philadelphia: 610 Morris Building
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Syracuse: 708 James Street
H. L. Hergett, Manager
Owensboro, Ky.: Wright Machine Co., Rep.
Omaha: 1736 So. 18th St.
B. S. Briggs, Rep.

Saving \$32,000 a Year with McClave Anthracite Stokers

THIS saving obtained by a McClave Combustion System for a large textile plant was accomplished as the result of more complete combustion, higher furnace efficiency and the use of cheaper and smaller coal than could be used previously.

Maintenance after three years of continuous service is almost negligible—less than one cent per horsepower per year.

This combination of unusual economy and low maintenance is typical not only of all types of McClave Stokers, but also of McClave Grates and all other McClave appliances. It may explain some of the reasons why approximately 50,000 installations of McClave Combustion Systems have been made in this and other countries.

Other reasons are discussed in "The Boiler Room and The Bank Balance," a book which describes interestingly the new McClave Stoker and the other McClave boiler room appliances. A copy will be mailed to you. Where?

McCLAVE-BROOKS COMPANY

Makers of the famous McClave Grates since 1883

Scranton, Pennsylvania

McClave COMBUSTION SYSTEMS *for greater economy*

Whitlock Rope Is the Choice of the Sea

ON many an ocean greyhound and many a sturdy freighter you will find Whitlock Manila doing its part toward making our Merchant Marine succeed. Because it lasts longer, Whitlock lowers operation costs; because it stands up manfully under the hardest tasks, in wind and in weather of every latitude, Whitlock reduces work aboard ship.

It is not surprising, therefore, that wise mariners, in ever-increasing numbers, are selecting Whitlock lines for their vessels.

WHITLOCK CORDAGE
THE UTMOST IN ROPE VALUE

Whitlock Manila is positively guaranteed to do your work right. Write for a catalog today, and ask for proof that Whitlock can save you money.

WHITLOCK CORDAGE COMPANY

46 South Street, New York

Factory and Warehouse
Jersey City, N.J.

Branches
Chicago, Boston, Kansas City
and Houston



19 Years of Continuous Service and still doing their duty

19 years of continuous service and still doing their duty. The boilers referred to in this letter are two 72" by 18' built for 125 lb. working pressure, and were shipped by us in June 1903.

ERIE CITY IRON WORKS ERIE, PA.

We also build Lentz engines and pulverized Coal Apparatus.

BOTTOM CREEK COAL & COKE CO.

Bottom Creek Mine
POCAHONTAS COAL

Vivian (McDowell County), W. Va.

July 3rd, 1922.

Erie City Iron Works,
Erie, Pa.

Dear Sirs:—

I wish to thank you for your letter of July 1st and blueprint of boiler installation.

It may be of interest to you to know that these boilers have been in continuous service since installed and have given very good satisfaction. Up to this time we have had not even a leaky tube on either boiler. They have been inspected regularly by the Hartford Boiler Insurance Co., and we have always had a very satisfactory report from their inspector.

Yours truly,

BOTTOM CREEK COAL & COKE COMPANY,
(Signed) G. S. Patterson,
Secy. & Treas.

GSP-cgh

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RADIAL BRICK AND REINFORCED CONCRETE
REFRACTORY BRICKWORK

THE RUST ENGINEERING CO.
ENGINEERS AND CONTRACTORS

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ALPHONS
CUSTODIS CHIMNEY
Construction Company

Also EXPERTS in
Repairing Brick and Concrete Chimneys
Heightening Chimneys
Lightning Rods Installed and Repaired
Work done while chimney is in operation, if necessary
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LONGITUDINAL AND
CROSS-DRUM TYPES
WASTE HEAT BOILERS
ALL CONFORM TO ASME CODE



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LARGE UNIT **BOILERS**

Heine Boiler Company

SAINT LOUIS, U.S.A.

BOILER MANUFACTURERS FOR 40 YEARS

THE BABCOCK & WILCOX COMPANY

85 LIBERTY STREET, NEW YORK

Builders since 1868 of
Water Tube Boilers
of continuing reliability

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PITTSBURGH, Farmers Deposit Bank Building
CLEVELAND, Guardian Building
CHICAGO, Marquette Building
CINCINNATI, Traction Building
ATLANTA, Candler Building
TUCSON, ARIZ., 21 So. Stone Avenue
FORT WORTH, TEX., Flatiron Building
HONOLULU, H. T., Castle & Cooke Building



WORKS

Bayonne, N. J.
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Makers of Steam Superheaters
since 1898 and of Chain Grate
Stokers since 1893

BRANCH OFFICES

DETROIT, Ford Building
NEW ORLEANS, 521-5 Baronne Street
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DENVER, 435 Seventeenth Street
SALT LAKE CITY, 705-6 Kearns Building
SAN FRANCISCO, Sheldon Building
LOS ANGELES, 404-6 Central Building
SEATTLE, L. C. Smith Building
HAVANA, CUBA, Calle de Aguiar 104
SAN JUAN, PORTO RICO, Royal Bank Building

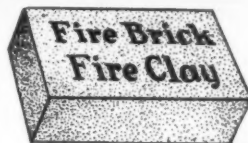
"HYTEST" FIRE BRICK

SEWER PIPE FLUE LINING
STEVENS BROS. & CO.

ATLANTA STEVENS POTTERY, GA.



—PLIBRICO—
FOR BOILER SETTINGS AND Baffles
BETTER THAN FIRE-BRICK
Can Be Installed By Inexperienced Labor
Will Withstand 3100 Deg. Temperature -
Shipped in Steel Containers only
JOINTLESS FIRE BRICK CO.
OFFICE AND FACTORY 1332 CLAY ST. CHICAGO



"SERVICE CROWN"
"AAA"
"BBB"

These are the only
CANNELTON Fire Brick Made

We are exclusive manufacturers

Write for sample and prices

CANNELTON CLAY PRODUCTS CO.

Office and Factory:
CANNELTON, INDIANA - U. S. A.

THE CAMBRIA CLAY PRODUCTS CO.

MANUFACTURERS

SEWER PIPE - FLUE LINING - WALL COPING
FACE BRICK - FIRE BRICK - FIRE CLAY
HOLLOW BUILDING TILE

Office and Works - BLACKFORK, OHIO

H. S. TEAL ANNISTON REFRACTORIES CO.

MANUFACTURERS OF
SILICA AND HIGH GRADE FIRE BRICK
PREPARED FIRE CLAY A SPECIALTY
OXFORD, ALA.

WHEN BETTER BRICK ARE MADE "TEAL" WILL MAKE THEM

WALSH FIRE BRICK AND SHAPES

WALSH FIRE CLAY PRODUCTS CO.
ST. LOUIS, MO.
CHICAGO NEW YORK

DAILY CAPACITY 150,000
A.P. Green
Fire Brick
MEXICO. MISSOURI

THE OHIO REFRACTORIES CO.

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HIGH GRADE FIRE BRICK
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"Mount Savage" Fire Brick

UNION MINING COMPANY

Plant:
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CHARLESTON DRY DOCK & MACHINE CO.

Successors to VALK & MURDOCH CO.

MARINE AND STATIONARY BOILERS
Repairs to Steel and Wooden Vessels

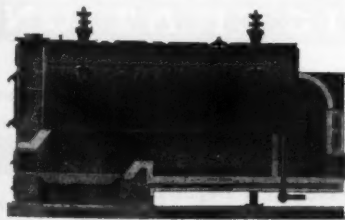
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WITH OR WITHOUT STEEL CASINGS



WE ALSO
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ENGINES
AND
HEATERS

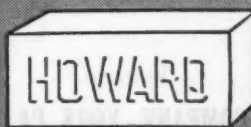
THE HOUSTON, STANWOOD & GAMBLE CO.
CINCINNATI

HIGH GRADE FIRE BRICK and GROUND FIRE CLAY

The Portsmouth Refractories Co.

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Factories: Portsmouth, Ohio, North Works; Portsmouth, Ohio,
East Works; Firebrick, Ohio; South Webster, Ohio;
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FIRE BRICK
FIRE CLAY

SPECIAL SHAPES

HOWARD REFRACTORIES CO.
DORSEY, MD.

WRITE FOR PRICES

If you have Ice making, or Refrigerating Problems

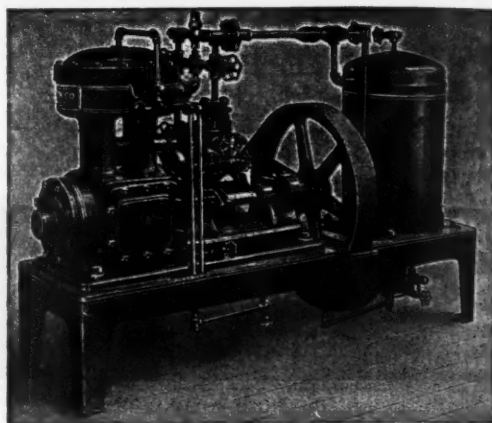


on which you require expert advice, we will give you the benefit of having your problem studied and suggestions sent you by men who make that problem their life work.

This information is at your service.

Write

THE ARCTIC ICE MACHINE CO.
CANTON - - - - - OHIO



FRICK COMBINED REFRIG- ERATING MACHINE

A simple and efficient small refrigerating plant built in one-ton and two-ton sizes. Portable. No foundation required. Ask our nearest distributor for further details and prices.

Frick Company
WAYNESBORO, PA. U.S.A.
EST. 1892

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FOSTER SUPERHEATERS

A necessity for turbine protection, engine cylinder economy and utilization of superheat for all its benefits.

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SOUTHERN ICE MACHINE COMPANY

Manufacturers of

Ice Making and Refrigerating Machinery

Charlotte,

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There is a YORK Machine to meet every practical condition of Mechanical Refrigeration.

If interested in Refrigeration or the Manufacture of Ice,

Write us.

YORK MANUFACTURING COMPANY - YORK, PA.
Ice-Making and Refrigerating Machinery exclusively

Voegt

HENRY VOGT MACHINE CO., Manufacturers, Louisville, Ky.

PRODUCTS

REFRIGERATING AND ICE
MAKING MACHINERY -
WATER TUBE & HORIZONTAL
RETURN TUBULAR BOILERS
DROP FORGED STEEL VALVES
& FITTINGS - OIL REFINERY
EQUIPMENT - Ask for Bulletin

BAKER SYSTEM REFRIGERATION

NOT to investigate the money saving possibilities of the Baker Ice Machine is an absolute disregard of those progressive principles which increase both business and profits.

Address your inquiry to Department Three.

BAKER ICE MACHINE CO. Inc.
Omaha, Nebraska

GRAVITY **FILTERS** PRESSURE
WATER SOFTENING PLANTS
AND
HYPOCHLORITE APPARATUS

ALL VARIETIES OF
CHEMICAL FEEDING DEVICES

Write for Bulletin 22-3

The New York Continental Jewell Filtration Co.
NUTLEY, N. J.

Member Associated Manufacturers of Water Purifying Equipment

ROBERTS FILTERS
FOR
CLEAN WATER

Ideally adapted for installation in textile mills; raw water ice plants; laundries, and for all industrial or municipal requirements.

"Write for Descriptive Literature."

Roberts Filter Manufacturing Co.

DARBY (PHILA.) PENNA.
NEW YORK OFFICE—FLATIRON BUILDING.

WE-FU-GO AND SCAIFE

WATER

PURIFICATION SYSTEMS
SOFTENING & FILTRATION
FOR BOILER FEED AND
ALL INDUSTRIAL USES

WM B SCAIFE & SONS CO. PITTSBURGH, PA.

**WATER SOFTENING AND
FILTRATION PLANTS**
INTERNATIONAL FILTER CO.

333 W. 25th Place, CHICAGO

New York Office: Woolworth Bldg.

**CRANE
STEAM SPECIALTIES**

DIXON'S

Reduces
fuel consumption,
prevents pitting,
will not evaporate

PIONEER
**BOILER
GRAPHITE**

and cannot
cause "foaming".
Booklet 80-T

JOSEPH DIXON CRUCIBLE CO.
Jersey City, N. J.

AMERICORE
RUBBER COVERED
WIRE

"Americore" Rubber Covered Wire, in all sizes for interior wiring, has all the desirable qualities of a new code wire. It meets the highest requirements of National Electrical Code and is recommended by leading engineers for all service conditions in which working pressure is 7,000 volts or under. Americore quality and service are proven by years of catering to the most exacting users and the strictest specifications.

Manufactured by

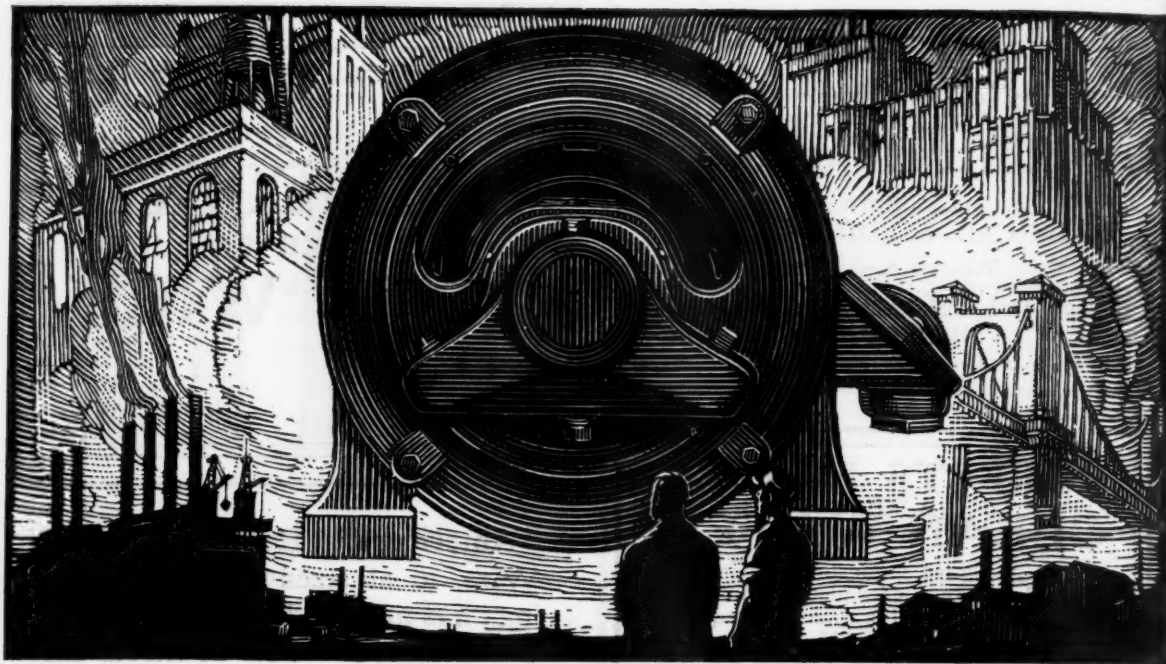
**AMERICAN
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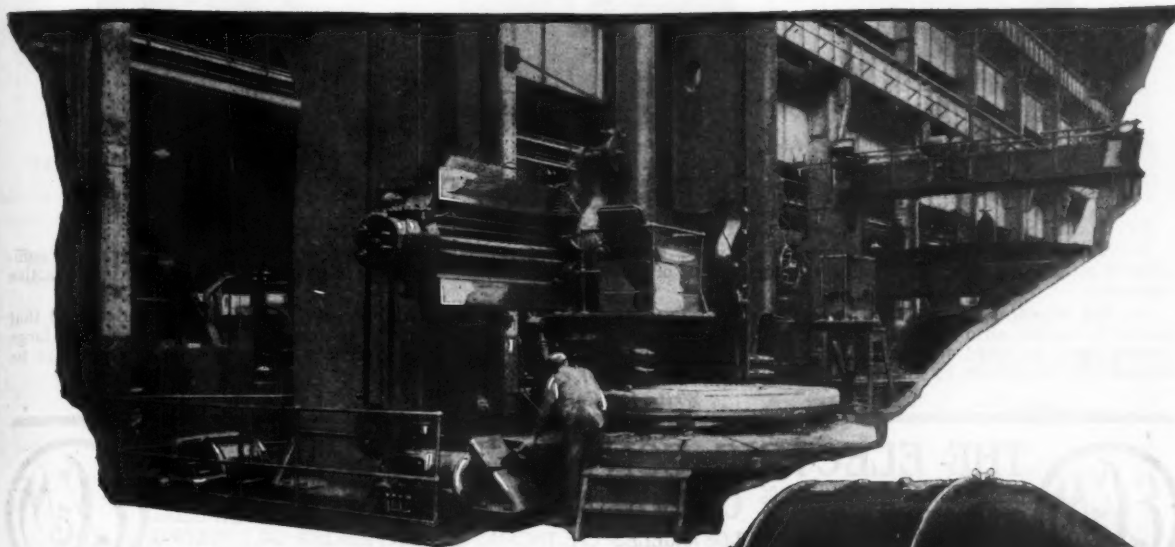


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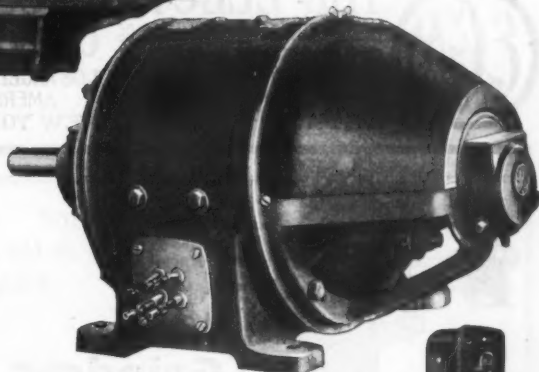
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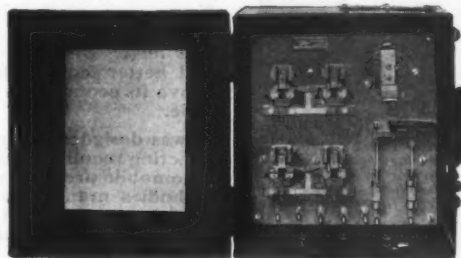
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G-E Push Button Station for actuating Magnetic Controllers



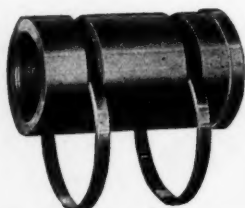
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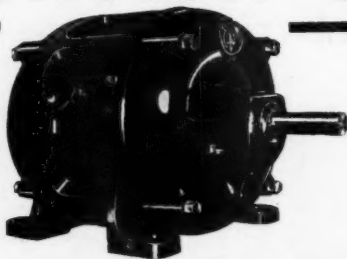
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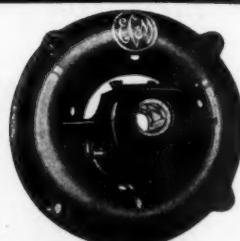
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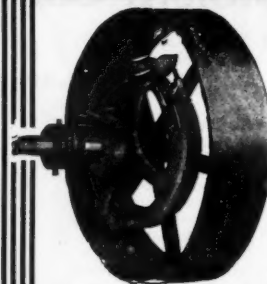
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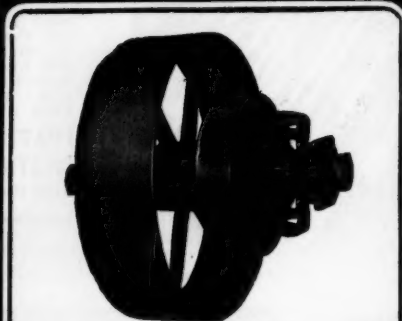
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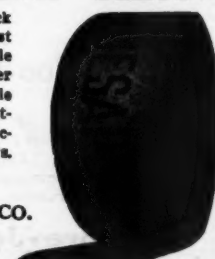
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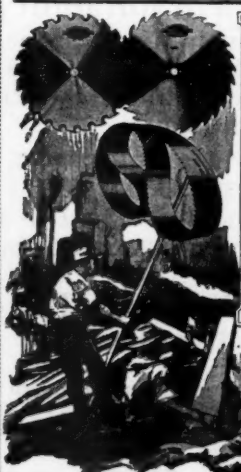
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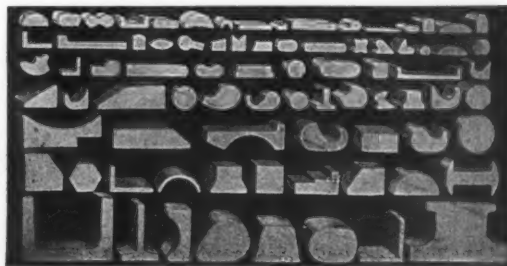
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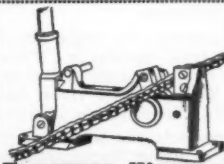
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U. S. BARGE LINE'S USEFULNESS—ITS FUTURE



A Mississippi-Warrior tow in Memphis harbor. Each barge has a capacity of 2000 tons. The shipment illustrated, if loaded to capacity, contains the equivalent of 400 carloads of merchandise and would require at least eight freight engines, crews and equipment to transport overland.

THE foundation for establishing low-cost transportation facilities on the trunk-line waterways in the Ohio and Mississippi Valleys was laid by the United States government in the Mississippi-Warrior Service. But for the successful installation of this barge line the present growing use of the rivers by great industries and by transportation lines under private capital would not have been encouraged.

As showing its practical usefulness to the steel industry, shipments of steel products on the Ohio river from Pittsburgh to the South, Southwest and West, are turned over in their original barges to the Mississippi-Warrior Service at Cairo for transportation to St. Louis, Memphis and New Orleans, for distribution out of these ports by rail into the interior, or by water to Gulf and Pacific ports, and for export—exactly as freight cars are interchanged between railroads.

Chicago district steel manufacturers also make use of the service for distribution of their products. These are shipped by rail to St. Louis or Cairo and forwarded thence in government barges. The Warrior river division serves the steel mills in the Birmingham District.

Thousands of tons of steel products are thus distributed annually by river and rail at lower transportation costs than all-rail. The circles in which these manufacturers may transact business are thereby enlarged; benefits accrue to the consumer; a stimulus is given to trade and commerce in general.

The Mississippi-Warrior project was incorporated by Congress during the war in an effort to increase the transportation facilities of the country in that critical period. A Republican Congress in 1920 ordered it continued and assigned to the Secretary of War for operation.

Its friends say it has since had to run the gauntlet of every attack which could be devised to harm or delay its development. One of the most persistent harassments has been the constant rumor that the Government is going to sell the equipment and close out the line. Although repeatedly denied by members of the Administration the effect of these rumors upon the business of the line naturally has not been beneficial.

Yet, in spite of difficulties, the Mississippi-Warrior Service is a profit-making government operation—possibly the only one in our national history. This should entitle it to the utmost respect. During the past year, the line showed net profit of more than 7 percent on an assumed replacement value of \$4,000,000, "and demonstrated", said Col. T. Q. Ashburn, acting Chief of the Inland and Coastwise Waterways Service, under which the line functions, "that with ample power, suitable terminals and sufficient depth of water, freight can be hauled at 80 percent of the rail rates and a profit made in doing it."

The public accomplishments of the Mississippi-Warrior Service for the fiscal year ended June 30, 1922, show that 876,303 tons of miscellaneous freight were carried at an average saving to the shipper of \$1.35 a ton. This aggregates a total public dividend in freight savings of \$1,183,009.00.

In addition, a depreciation fund of about \$300,000 annually is being set aside to retire or renew Government investment.

With such a showing, is not the management of the service warranted in expecting constructive assistance from the Government?

There is a growing feeling throughout the Ohio and Mississippi Valleys that a Government institution which, against rather unequal odds, has been able to exhibit such public accomplishments as those above outlined should be held firmly by the Government and fostered until such time as the legal status of water projects can be so well defined that this one can be taken over through normal and orderly methods by the investment of private capital.

By the time that condition is reached, which ought to be within the next few years, it is expected that Congress will have provided for completing channels and cities have built terminals, so that this and similar enterprises to be established may become good paying transportation lines, working with the railroads, the motor services and the coming airways to give this nation a distributing system not to be equalled elsewhere in the world.

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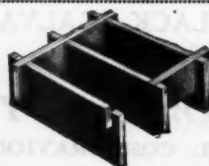
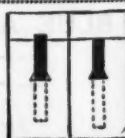
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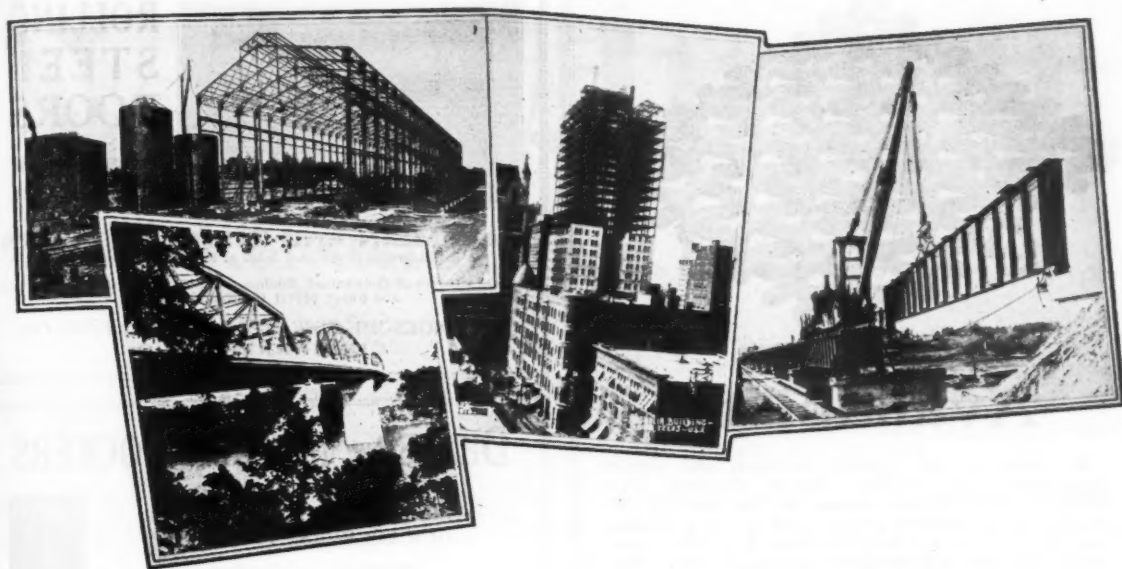
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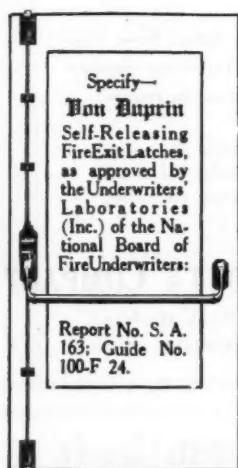
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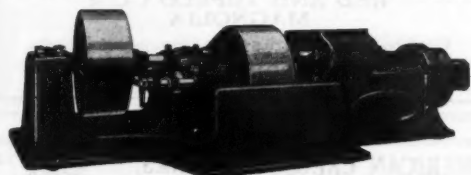
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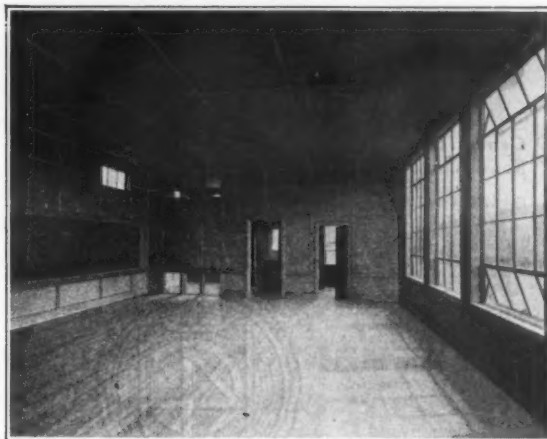
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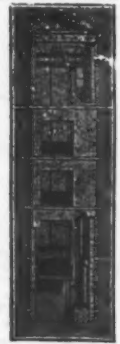
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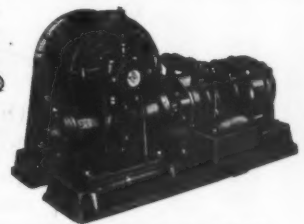
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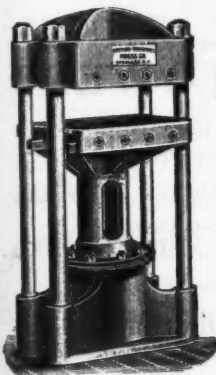
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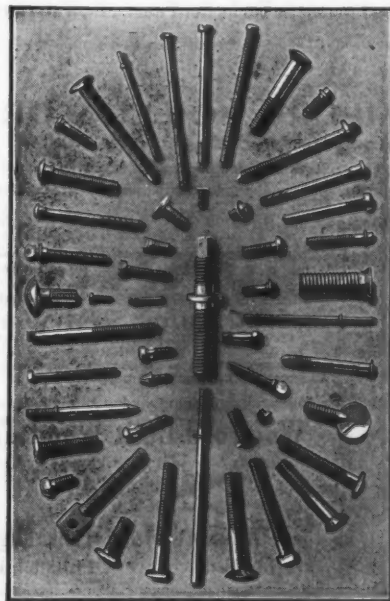
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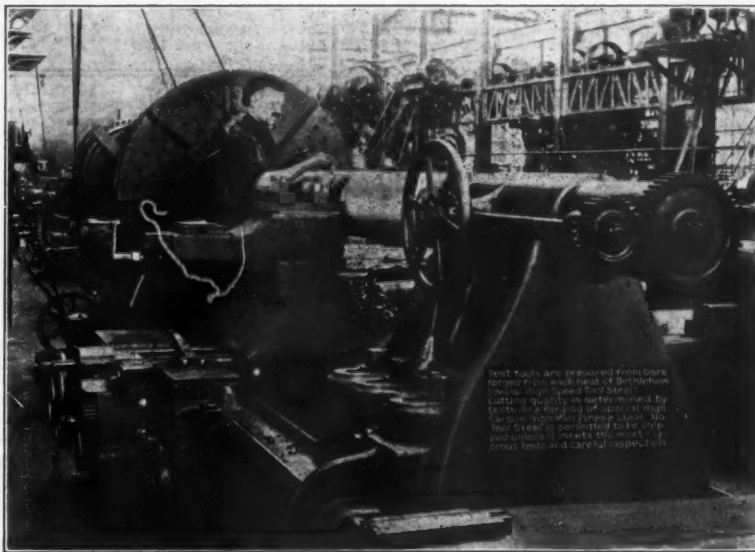


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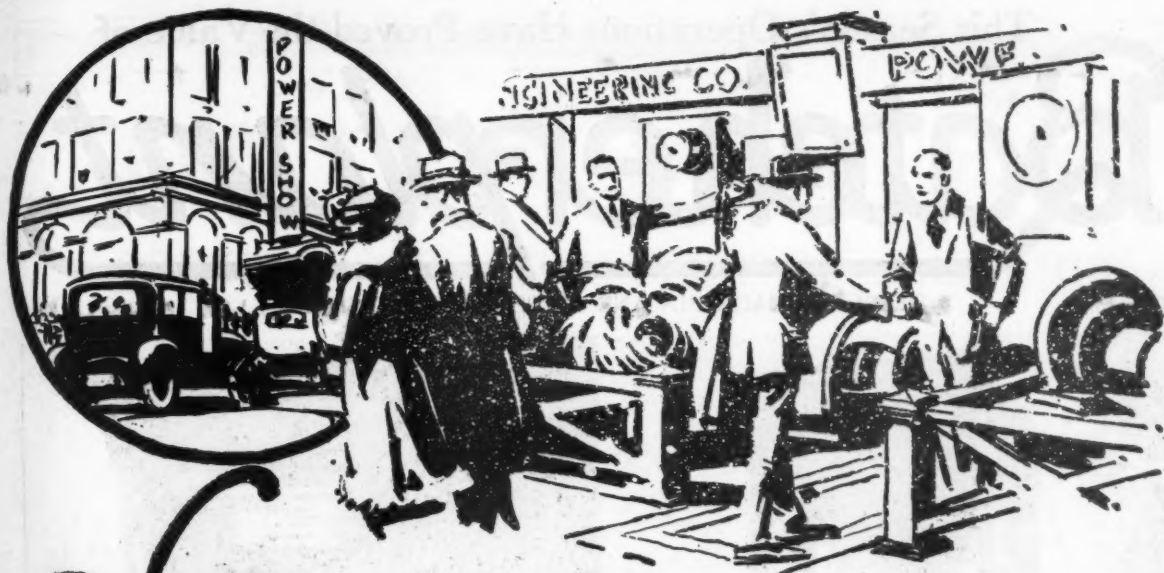
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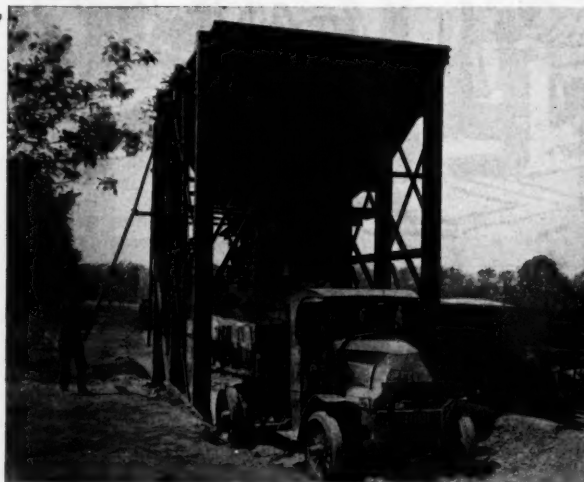
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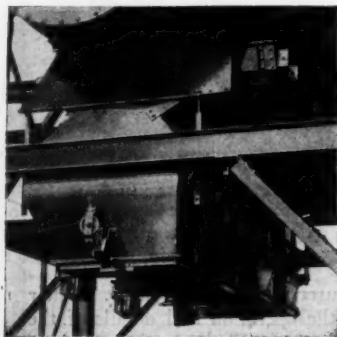
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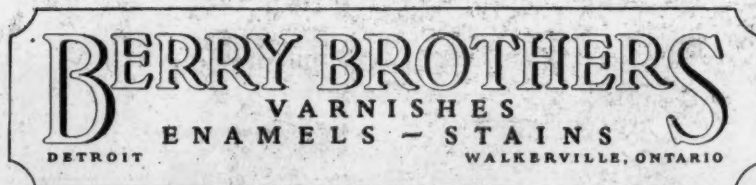
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Exponent of America

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Volume LXXXII

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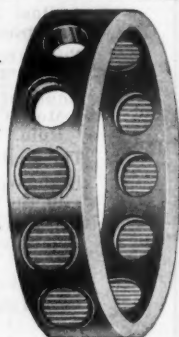
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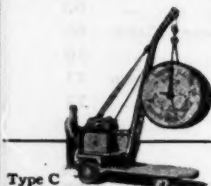
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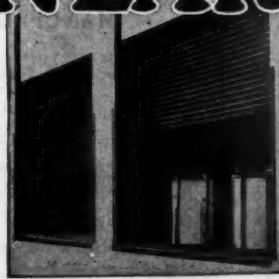
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WEEKLY.

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AGAINST PROPOSED AMENDMENT TO TAX ALL SECURITIES.

THE MANUFACTURERS RECORD does not by any means always agree with the New York Herald in its position on business questions, but we are glad to know that the Herald and this paper are in hearty union of thought in opposition to the proposed constitutional amendment against the exemption of state and municipal securities from taxation. Discussing this proposition the New York Herald said:

"President Harding is expected to ask Congress to set in motion the procedure for another Constitutional amendment. This would be to prohibit the issue of tax-exempt securities by States and municipalities.

"The interest rates paid by States and municipalities come out of the pockets of the taxpayers in those States and municipalities. So the United States Government would be asking the States, in effect, to tax themselves and their municipalities and their taxpaying populations enormously, not for their own uses but for the uses of the national Treasury.

"The New York Herald cannot see the States doing anything of the kind, and The New York Herald does not think the States should do anything of the kind. The States will be justified in taking the stand that the national Government has all the taxing power it needs to get all the revenues it needs for legitimate and reasonable purposes."

SPREADING THE TRUTH ABROAD.

FROM Winnipeg, Manitoba, comes a letter from the Social Service Council of Manitoba for ten copies of the publication recently issued by the MANUFACTURERS RECORD entitled "The Prohibition Question Viewed from the Economic and Moral Standpoint." This pamphlet is having a world-wide circulation, and is destined to influence the views of the whole world on the Prohibition question.

POOR CUBA!

M R. W. P. G. HARDING, former Governor of the Federal Reserve Board, will, it is announced, assist the Cuban Government in reorganizing the Island's finances. Poor Cuba! She has our sympathy.

NO SCARCITY OF LABOR WOULD JUSTIFY ENCOURAGING INCREASED IMMIGRATION.

WHEN the pilgrims on the Mayflower landed on the coast of Massachusetts they reverently knelt and thanked God for their preservation, and dedicated to the worship of Almighty God, as far as they could do so, the newly discovered country. The early settlers in Virginia promptly built churches, some of which still stand in good preservation, in order that they too might worship God. Huguenots who came in the early days to this country fled from persecution in Europe in order that they might have the right to worship God according to the dictates of their own conscience. Catholic priests in the pioneering days established their missions from the border line of Texas to Canada and out through the West to the Pacific coast. Practically all of the immigrants who came to America in those days and founded this country and later on established the American Government, did so with profound religious convictions, and here for the first time in human history was established a government with the complete separation of Church and State and the utmost religious and civil liberty.

How mighty has been the change from the religious spirit of the pioneers of those early days to the spirit of a very large proportion of the immigration which we have had during the last twenty or thirty years! In contrast with the deep religious life of the early pioneers we have had a rush of immigrants who to a very large extent have practiced, and very often preached, the doctrine proclaimed by the Russian Bolsheviks, "To Hell with all churches, all synagogues, all government! We are atheists! We are anarchists!"

These people have come to us by the millions. We have talked about America being the great melting pot through which by assimilation we might create a new race superior to anything the world had known. Never was there a greater mistake. We cannot amalgamate into a homogeneous body the races which through unnumbered centuries have bred the same classes with the same thoughts and the same spirit. Who for a moment could imagine that the races from the Balkan region and Southeastern Europe generally, where fighting has been the accepted order of the day for a thousand years or more, could have all of the blood and all of the fighting spirit eliminated out of them by their coming to America? Through the centuries these people have been bred to fighting, and until Christianity in its deepest meaning has completely changed the racial thoughts of the whole world we cannot assimilate into the spirit of America the races that are alien in language, in thought, in the idea of freedom and of religion. Here and there may be found a man or woman who under the influence of the preaching of the Gospel can be changed in spirit and in act, but broadly speaking we must recognize that we cannot amalgamate

these alien races with the native stock of the God-fearing people who settled America.

We regard with serious alarm the demand of large employers of labor that the bars of immigration be let down in order that they may produce a larger output from their plants. Infinitely better would it be for us to go more slowly in our material development than for increased development to be brought about by larger immigration. We have more of this foreign element in America than we can assimilate for generations to come. They are a danger to this country. They are a menace to this Government, and until we have Americanized the people now here we ought to hold a very strict regulation against the incoming of others of the same type. No plea of employers of labor for a larger supply should be allowed to open wide the doors for immigration.

This point is strikingly emphasized in an article in the Scientific Monthly of October by Prof. Robert DeC. Ward, of Harvard University. Prof. Ward says that it is now obvious that our so-called "asylum" has become crowded with alien insane and alien feeble-minded, and that our "refuge" is in fact the penitentiary, well filled with alien paupers and criminals. "It is," adds he, "for the best interest of the alien as well as for America that our immigrants should be numerically restricted and wisely and carefully selected."

"Our duty as Americans, interested in the world-wide progress of education, of religious liberty, of democratic institutions, is not only to preserve our own institutions intact, but also to help the discontented millions of Europe and Asia to shoulder their own responsibilities at home; to work out there, for themselves, what our own forefathers worked out here, for us and for our children."

Dr. Ward quotes Aristophanes as saying, "Never shall ye make the crab walk straight. Never shall ye make the sea urchin smooth;" but we have been proceeding on the theory that in our so-called great American melting pot we could make the crab walk straight and the sea urchin smooth. Or in other words, that we could take millions of aliens of all nations, habits and languages and by teaching them a little English and giving them flag drills make genuine Americans of them. "The laws which rule in the world of lower animals," said he, "obtain equally in the case of man. We cannot make a heavy draft horse into a trotter by keeping him in a racing stable, nor can we make a race true to the old American type by any process of Americanization, essential as that undertaking is for creating better citizenship. It is distinctly the trend of modern biological discovery that heredity is, on the whole, far more important than environment in determining not only the physical but also the mental characteristics of man." And he quotes Dr. Henry Fairfield Osborn as saying, "We are slowly awakening to the consciousness that education and environment do not fundamentally alter racial values."

Dr. Ward meets the plea of those who want to increase the labor supply in order to speed up their factories, by saying that this labor "is usually in the long run, socially and politically, very expensive. That a tremendously rapid development of our country is by no means altogether desirable, and that every immigrant is to play a part in the formation of the future American race. This matter of cheap alien labor presents wholly different aspects."

Elsewhere in this issue we are publishing, as we promised last week to do, an illuminating article on the influence of immigration in decreasing the birth rate of the American stock, written in 1892 by Gen. Francis A. Walker, certainly one of the ablest political economists and statisticians which this country has ever produced. We trust that manufacturers and other employers of labor, eager for a larger supply, will recognize the danger of increased immigration to the safety

of this country, and see that the future of their own industries as well as of our Government can be better safeguarded by restricted immigration than by letting the bars down for an inrush of the foreigners who bring with them their anarchistic, Bolshevistic spirit of turmoil, and with a desire to overturn or destroy property rights and the Government itself.

HOURS OF LABOR ON THE FARM OR IN THE FACTORY MUST CHANGE OR WE WILL HEAD FOR NATIONAL RUIN.

A FARMER reader of the MANUFACTURERS RECORD sends to this paper two clippings. One tells of the suggestion of Mr. John D. Rockefeller, Jr., who advocates an eight hour day for laborers while the other gives the following account of the work of Mr. Taft of the United States Supreme Court; and what Mr. Taft does is typical of what tens of thousands of professional and business men are doing in the way of work:

"Mr. Taft is up every morning at 5.30 o'clock. By 6.15 he is at work in his study in his house. (None of the justices has an office. All of them do all of their work at home.) He works until 8.30, when he has breakfast. At 9.00 he is at his desk again and stays there until 10.15, when he starts to walk from his house to the Supreme Court Chamber in the Capitol. That is a little journey of three and seven-tenths miles. When Mr. Taft arrives on Capitol Hill he is in need of a bath and fresh linen. That process requires half an hour. As Chief Justice he then has a certain amount of routine administrative and executive business to dispose of. He barely gets through with it before noon, when the Court opens its session to hear arguments and pleadings. It sits until 4.30 o'clock, with a half hour intermission for lunch.

"Mr. Taft drives home every afternoon and is at his desk again at 5.30 o'clock. He works until 6.45, has dinner at 7, goes upstairs to his desk at 8, and gets in two solid hours of labor before going to bed, at 10 o'clock. That is Mr. Taft's life from October until June, and, with slight variations in the schedule, it is the life of every other member of the Court."

The statement in regard to Mr. Taft is by Mr. Edward G. Lowry in the Philadelphia Ledger, and commenting on this our farmer friend writes:

"Mr. Lowry might well write an editorial on the eight hour day. Negro laborers used to work on the plantation from 'sun to sun.' They now come to the cities and stop work at 4 o'clock in the afternoon. I have to work until 6 to get money to pay taxes, though I am over 70 years old."

What this farmer states in regard to work on the farm as compared with the work of laborers in the city shows the wide divergence in the hours of labor between producers of foodstuffs and the city consumers of foodstuffs, so far as the laborers are concerned. This cannot continue. Farm labor sooner or later will demand the same hours of labor given to city laborers, or else they will quit the farms and go to the cities, and the food supply of the nation will grow steadily smaller and smaller. We cannot permit one class of people to work from sun rise to sun set, as the farmers do, in order to produce foodstuffs for another class of people who will work only 8 hours a day, without bringing about a condition which will endanger the food supply of the country to such an extent as to threaten to bring to America the destruction which has followed every other nation in the world's history when agriculture was destroyed by the growth of cities drawing the people from farm life into city life.

THE RAILROAD SITUATION.

VOICING the same thought which has been constantly expressed in the MANUFACTURERS RECORD in regard to the inadequate transportation facilities of the country, the Railway Age calls attention to the fact that for the first time in its history, the country is confronted at the very beginning of a business revival not only with a shortage of transportation but with the most acute shortage that ever existed. "There is," says the Railway Age, "only one real remedy for this situation, and this is the expansion of railroad facilities." The net car shortage as shown by the American Railway Association on October 15, was 152,084 cars.

Car and locomotive shortage is one of the very serious transportation problems, but inadequate terminal facilities also furnish a serious problem, the solution of which must be found.

The country needs a great expansion of terminal facilities, and cars must be loaded and unloaded more promptly, without regard to the inconvenience of shippers or receivers. Under present conditions it is impossible, without hampering all business interests, for railroad cars to be used for storage purposes, even for a few days. When a loaded car reaches its terminal point it should be voluntarily unloaded at once, or else the receiver should have to pay a per diem sufficiently great as to force him to unload the stuff. Shippers should also be required to load cars promptly. The delay granted to shippers and receivers might have been justified in times past but they can no longer be justified, for every day's delay in the loading or unloading of a car is hampering the business interests of the country. The railroads must provide ample terminal facilities and arrange, when the freight is to go into warehouses, to unload it immediately, or if it is consigned direct to a shipper the shipper must be required to act with equal promptness.

It is impossible for the railroads, if they had untold billions at their command, to increase their cars and locomotives and track to a sufficient extent, within the next four or five years, to take care of the growth of the trade of the country. No amount of money can overcome this situation, though billions of dollars must be expended to ameliorate the condition. In the meantime the best possible use must be made of every car and locomotive. They must be speeded up more rapidly in the handling of freight when on the track, and they must be speeded up in delivering the merchandise which they carry. It is incumbent upon the shippers and the receivers to do their part, for in acting promptly in the loading or unloading of cars, they are contributing to their own prosperity by helping the railroads to make the best of their inadequate transportation facilities. The shipper or the receiver who holds a car unnecessarily long is a contributing cause to the present railroad breakdown. It is not for the benefit of railroads per se that this prompt action of shipping and receiving must be handled, but for the general business interests of the country. The railroads are merely one factor in the situation. Shippers and receivers are in some respects the biggest factor in the speeding up of traffic and in enabling the railroads, with their limited rolling stock, to accomplish the greatest results for the benefit of the country.

Nevertheless railroads must buy cars and locomotives and improve terminal facilities to a larger extent than ever before, even if they do not make full earnings or else as sure as night follows day they will be forced into physical and financial bankruptcy and be rebuilt on receivership certificates. This is not a threat, and not by any means an antagonism against railroads but merely a prophecy based on common sense and economic laws.

HIGHER WAGES MUST BE PAID TO KEEP LABORERS IN THE SOUTH.

A LEADING lumber operator in North Carolina calls the attention of the MANUFACTURERS RECORD to the fact that the iron and steel people of the East now have their agents at work in the South seeking to draw negro laborers away from present employment and carry them North and West. He writes that a few weeks ago two car loads of negroes were taken out of Richmond for work at Northern steel plants, and he adds, "I am told that one-half of the negroes who went North to work during the war period have since died. Poorly and thickly housed they soon contract tuberculosis and die. It is stealing, pure and simple, to take these men away from us who need them so badly, and when work is slack again at the steel mills they will be the first to be discharged. I wish you would look into this and see what can be done."

To this complaint the MANUFACTURERS RECORD can only say that nothing can be done to stop the efforts of Northern and Western iron and steel works, shorthanded as they are, from seeking to draw negro labor from the South. We were recently told that from one county in Georgia more than 60 per cent of the negro tenants on cotton plantations had left for other sections, and a somewhat similar movement, though perhaps not quite so heavy, is going on in every part of the South. Many negro tenants who have had to face the boll weevil conditions, against which they are not equal to contend, are receiving tempting offers at larger pay than they have been getting in the South, to go North and West. Naturally they are moving that way.

The South must face the situation that the North and West will to the utmost extent of their ability drain negro labor away from the cotton farms and from industries, on the promise of larger pay. The negroes who are moving North will not be frightened by the report of adverse housing conditions, or of sickness produced by living conditions around the steel mills and iron works. The South must solve the problem of the retention of its laborers by paying wages commensurate with the wages which they are offered in other sections. The curse of the South has been its low wages on the farm and in the factory and in the office. Many years ago the late Edward Atkinson, through the MANUFACTURERS RECORD, repeatedly warned the South that it would inevitably lose its negro working population, which is a great asset of this section, unless it improved their living conditions and gave them higher wages, and, said he, "low wages are in the end the costliest wages."

You can not develop the individual man or the individual country to full capacity on low wages. Unwise leadership has ever since the Civil War held wages in the South to a figure far below the wages paid in other sections. This has proved an economic curse. If wages had been adjusted on a higher scale, affording a better living opportunity for laboring men, white and black, better homes and better living conditions generally, the whole South would have been lifted to a higher plane of prosperity. High wages and high salaries were largely responsible for the great development of the Pacific Coast, and for the abounding prosperity which has existed in that section, as well as in many parts of the West.

The South must come to a realization of the necessity of paying higher wages. It must retain its laborers by paying wages commensurate, measured by the cost of living, with the wages, paid elsewhere. It must give to its laboring people, white and black, on the farm and in the factory, better homes, and enable them to live in that degree of comfort which the well-paid laborer of the North and West can enjoy. In no other way can labor be retained in the South. If we permit the negro and other laborers to be drawn from the South by the activity of labor agents from the North and

West, seeking more men for work in iron and steel and kindred plants, we will not only lessen the supply of labor in the South, but we will bring about a condition in which this section, by reason of scarcity of labor, will have to pay even higher wages than other sections. Low wages are a curse to the individual and to the section in which they prevail. Good living wages are a blessing to the individual and to the country which pays them.

Many Southern States are reporting an exodus of negroes to the North and Middle West. They have been leaving in droves from some sections of the cotton belt, and the reason is obvious when the following facts regarding the scale of wages paid this class of labor are known.

The average rate of wages of male farm labor for the whole country October 1 was \$28.97 a month with board, against an average of \$30.14 a month in 1921, according to reports of the United States Agricultural Department. By the month without board the average farm wage October 1 was \$41.58 compared with \$43.32 in 1921. Day wages with board October 1 were \$1.57 compared with \$1.68 last year, and day wages without board were \$2.08 compared with \$2.18 in 1921. In the South workers of this class have received a much lower rate and even then in some States the supply of labor has been in excess of the demand.

Of 1300 reports from county crop reporters to the Agricultural Department, 36 per cent stated that the labor supply exceeded the demand at current wages, 33 per cent stated that the demand exceeded the supply, and 31 per cent reported an even balance. Excess of supply was said to be most pronounced in the cotton states, Georgia, Florida, Texas, Oklahoma, and Arkansas; also in Missouri, Nebraska and Kansas. Demand exceeded supply in New York, Pennsylvania, Virginia, West Virginia, North Carolina, and the Pacific Coast States.

Higher wages and shortage of labor in the industrial centers are drawing farm hands away from the country. This is the inevitable result of the drastic deflation policy which all but ruined the farmers of the country and especially the Southern cotton farmers who have been struggling under a load of debt practically criminally brought upon them. The most amazing thing is that the cotton farmers have been able to rally in so heroic a manner, creating employment and paying the wages that have prevailed. Then, too, thousands of the negroes who are leaving the South have been "croppers." They have worked hard and faithfully. They have seen their crops sold this year at prices barely above the cost of production. Thousands of these "croppers" were deeply in debt at the beginning of the last cotton year. They have been "carried" by their landlords ever since hoping against hope for a living price on their year's labor when their crops were sold. The Southern white farmer who has stood between the negro farm hands and starvation for the last two years will be delivered of this burden by the emigration of the negroes to the North and East. People outside of the South have no conception of the drain this has been on the white farming landholders for in other sections when an employer ceases operations he is not compelled to look out for his former workers. It is bad enough, he thinks, for him to lose money and have to close down his plant. The Southern cotton farmer has had to keep on operating and feeding his hands, losing money on every worker on his farm.

HIGHER BUILDING COSTS PREDICTED.

THE Associated General Contractors of America believe that construction prices will remain high and possibly go higher because of advancing price of materials and decreasing labor supply. For six successive months figures for contracts let have been record-breaking. The slight recession of August was less than the usual seasonal recession. As a result of

careful investigations it has been estimated that the deficit in building, the country over, is so great that building could continue for ten successive years at 25 per cent above normal before catching up with that deficit. The Associated General Contractors state they "do not predict any such sustained activity, but we do point to the figures as proof that there is no possibility of the present building boom coming to an end within the next few months, because of having completely filled the demand for new construction."

IMPORTANCE OF AMERICA'S CORN CROP.

CONSUMED directly or in the form of meat and other animal products, corn is the principal source of the nation's food supply. The vital importance of the corn crop and its relation to American prosperity has been reviewed by the Department of Agriculture in the 1921 Yearbook, just published. In a graphic survey the Department has presented the story of corn in all its details.

Of approximately 6,500,000 farms in the United States, nearly 5,000,000 produce corn. Nearly 100,000,000 acres of farm land are devoted to this crop, which in recent years has reached more than 3,000,000,000 bushels. The 1921 corn crop, under low prices, was valued at \$1,303,000,000.

It is shown that 40 per cent of the total crop is fed to swine on farms, 20 per cent to horses and mules on farms, and 15 per cent to cattle on farms. Only 10 per cent is used direct for human food, but 85 per cent is used through the consumption of meat and meat products. Corn is the basis of the nation's livestock industry.

The United States produces about three-fourths of the corn crop of the world. There are no large competing countries, but corn is an important crop in Argentina, Brazil, Mexico, and some of the southern European countries, though not yet in serious competition with the United States. It is shown that less than half of the corn land in the corn belt is allotted to corn in any given season, and that over 50 per cent of the corn land is occupied by small grains and hay.

The production of corn is financed with less use of borrowed capital than is the case with most other staple farm crops, it is stated. The reason given for this is that because of the diversified system of farming followed in the corn belt, the farmer's income is distributed throughout the year more evenly than is the case in many other sections. The direct investment in a corn crop consists more of the farmer's own labor and less of purchased material and equipment than is the case with many other crops.

The future demand for corn depends on many things, most important of which is the demand for meat. If increasing supplies of meat, especially pork, are required for our own use and for export, then our corn production must be increased, as we can grow enough meat to supply an enlarged demand with our present production of corn. A total production based on an intelligent survey of world requirements, together with economies resulting from better seed and cultural methods, and improved marketing organized in reference to seasonal supply and demand will go far to prevent future crises for the corn grower.

Unusually heavy exports of corn have been made this year; the shipments bid fair to exceed exports of any year since 1900, when they reached 190,386,000 bushels. From January to August, inclusive, this year, approximately 131,000,000 bushels were exported which is slightly more than the total corn exports for 1921. In addition, 452,766 barrels of corn meal and corn flour, equivalent to 1,811,000 bushel of corn, were exported during the first eight months of 1922. The chief markets for American corn and corn products are the United Kingdom, the Netherlands, Denmark, and Germany, Canada, Cuba, and Mexico.

WHEW! DOES HE REALLY BELIEVE ALL THIS?

W. C. DOWNING of Germantown, Pennsylvania, has issued a ten-page circular letter addressed "To The American People" in which he turns himself inside out metaphorically speaking and exhausts the vocabulary to express his hatred for national Prohibition and all who favored its adoption. "National Prohibition," says he, "is the product of arrogance, insolence, impudence and dishonesty on the part of a puny minority of canting, psalm-singing zealots,—aided by lobby whipped-lashed political puppets—who deliberately determined that others should not have liberties and pleasures to which they were opposed."

"National Prohibition is based on despotism and the antagonism of busy-bodies, despicable tyrants and diabolical, cold-blooded, calculating assassins of other peoples' constitutional rights. It is an insolent, unjust and damnably outrageous, gross impertinence, thoroughly illogical and dishonest."

According to Mr. Downing's teachings Judge Gary, Frank A. Vanderlip, Thos. A. Edison, all the leading railroad presidents and tens of thousands of the foremost business men in America are "canting, psalm-singing zealots" guilty of "insolent, unjust and damnably outrageous, gross impertinence." Well, that is going some but perhaps these leaders of the nation have some right to their belief in the wisdom of Prohibition, Mr. W.C. Downing to the contrary notwithstanding. We never heard of Mr. Downing before, but we take it for granted that in brains, in the love of the constitution, in patriotism, in work for the betterment of humanity, he must be as far above such men, judging him by his own language, as a thousand candle power electric light is resplendent in contrast with a poor little tallow dip or a smoke covered chimney on a five cent oil lamp.

Behold this mighty genius, this leader of a nation's patriotism who finds that all Prohibition workers "are diabolical, cold-blooded, calculating assassins of other peoples' constitutional rights." Go back, way back, Judge Gary and the mighty host of business men who like you appealed for National Prohibition and now uphold it as a national blessing of limitless value, and sit down and repent of your "diabolical and cold-blooded assassination" and you, great educators, university and college presidents and professors; you President Harding, and you lawyers, and judges and doctors who are praising National Prohibition, and bemoan your short-sightedness and your lack of patriotism and your love for humanity.

Has not Mr. Downing characterized you all as psalm-singing zealots—a puny minority full of arrogance, insolence, impudence and dishonesty?

But to return to Mr. Downing. Hear the mighty oracle again:

"We are a very sober people, and our drinking habits were to be highly commended."

Judged by the context we suppose Mr. Downing intended to say "we were a very sober people" because he insists now that we are becoming a nation of drinkers and "bribers, corruptors and law-breakers," and National Prohibition he adds, "has torn down the citadel of our true democracy and enthroned the canting psalm-singing zealot, hypocrite, fanatic, grafter, thief, liar, bootlegger, smuggler, blackmailer and murderer."

"Ye gods and little fishes" what bad people we are!

All who worked for National Prohibition are guilty according to Mr. Downing of having aided in the "prostitution of

the organic law of the nation," but considering the intimate relations existing between prostitution and the liquor traffic in olden days, the use of this word may be passed over without discussion.

Having gotten all of "these languages" out of his system, and surely they would have caused an explosion if they had not come out, our author turns loose upon our legislators, national and state. They are all bad, rottenly bad moral cowards and "political weaklings," for does he not say so, and who would dare question the accuracy of such a master mind bent on saving the nation from eternal ruin?

Hear him, O ye politicians, some of whom are perhaps almost as honest and intelligent as their denunciators. Here is what he says of you in regard to National Prohibition as voiced in the Eighteenth Amendment:

"It was ratified, not by the will of the people, but by cowardly and dishonest State legislators,—political weaklings, who degraded their office—who were the servile servants of the professional Prohibitionists, and at the command of their masters, voted for the amendment; theirs not the reason why. The ability of those moral cowards would be severely taxed if it were focused on any problem more intricate than that of keeping their political jobs. Its ratification was a national scandal and disgrace and makes one of the blackest pages in our political history. * * *

"Political cowardice and not fearless statesmanship is responsible for National Prohibition. In state after state many legislators were opposed to the amendment, but the cowardly political puppets were licked into submission by the lobby whip-lash of the professional Prohibitionists—political blackmailers—to its ratification, often in defiance of the clearly expressed popular will. * * *

"It is no exaggeration to say—and I emphatically say it—that most of our state governments are corruptly conducted and many are thoroughly rotten institutions, which is due to the lack of incentive for honesty and efficiency on the part of most of those holding public office. Few public officials manifest an interest of a sort that leads to honesty, and most men who resort to public office as a means of livelihood are impecunious, and they soon become political cowards, consequently, untrustworthy representatives, and are merely a part of the comedy of government. These are facts, established and indisputable. It is a hideous picture, and one would be less than human if not profoundly touched with utter contempt for such public servants. * * * Most Prohibitionists are canting, psalm-singing hypocrites, but the professional Prohibitionists are rotten at the core, with a coat of varnish covering their worm-eaten fabric, and it is a poor appraisalment of a nation's public men, when they supinely submit to having their thinking and lawmaking done for them by such scoundrels."

To Mr. Downing the decision of the Supreme Court amounts to nothing which we should accept as a final settlement of Constitutional questions, for after saying that "no more sweeping decision has ever been handed down by the Supreme Court of the United States than that which affirms the validity of the Eighteenth Amendment and the law for its enforcement," he adds:

"Here are a constitutional amendment and an enforcement law which violate the constitutional guarantees of the people, affecting their individual liberty, domestic habits and property rights, to an extent quite unprecedented in our history. They are approved by many, but they are also repugnant and offensive to most. They are regarded by the great majority of the people as incompatible with the fundamental principles of the Constitution and therefore properly invalid, the decision of the Supreme Court of June 7, 1920, to the contrary, notwithstanding."

Mr. Downing would thus set at naught the decision of the Supreme Court and pour contempt upon that tribunal which stands as the most august body of constitutional lawyers in the world's history.

Again turning to the poor Prohibitionists or "thieves of personal liberty," he says they should be "censured with all the vigor of our vernacular" and he again essays to do his best in that line for he adds:

"The Statue of Liberty in the harbor of New York should

be returned to France with our sincere regrets, and in its place should be erected a statue of the Scowling Puritan, with the left arm tenaciously clasping the Bible, and holding aloft in the right hand, an old-fashioned night-watchman's lantern, as a beacon to guide the wayfarer to his destruction on the rocks of fanaticism, falsehood and political cowardice; and at the base of the Statue should be inscribed the following: Erected by superficial idealists, intolerant bigots, temperance extremists, religious zealots and political cowards—a puny minority of American citizens—in commemoration of the abrogation of the Declaration of Independence, the Constitution of the United States, and the Bill-of-Rights. All ye who enter here will forego individual liberty and personal property rights."

The views of Mr. Downing as an individual are not worth much, but we give him this space that our readers may understand the spirit which he represents, a spirit which seeks to befuddle the country and to make thoughtless men lacking the intelligence to understand or the willingness honestly to investigate the truth, believe that only narrow-minded hypocrites favored National Prohibition.

Against such deliberate efforts to falsify the facts we would put the testimony of thousands of the nation's foremost men of affairs, educators and lawyers and physicians as to the wonderful good wrought by Prohibition in reducing accidents on railroads and in factories, in blotting out the saloon,—the open door to hell here and hereafter,—and lifting from millions of women and children the appalling woe and poverty and degradation due to drinking by husbands and fathers.

God pity the man who puts his so-called "personal liberty" against the tremendous success of Prohibition which for more than a quarter of a century heroic men and women, loving humanity more than ease or life itself, sought to secure for our country.

THE OPEN SHOP, OR THE CLOSED SHOP.

"While I regard the Record as a great industrial journal and I particularly appreciated its support of Williams and Heflin in the fight against those outlaws and savages known as the Federal Reserve Board, still I cannot go the "open shop." Just as the literary ones need the "copyright" laws and others to protect them, the workers need unionism to protect them against the Atterburys, Santa-Fes and others. "Open Shop" means slavery just the same as dear money means stagnation and death to the raw material producers."

The foregoing is an extract from a letter to the MANUFACTURERS RECORD from Mr. J. R. Munroe of Riverton, La. We do not know whether Mr. Munroe is an employer of labor, or an employe, but we are glad to have his criticism of the advocacy by the MANUFACTURERS RECORD of the Open Shop, for criticism is often as helpful as commendation.

In olden days, when labor unions stood for sobriety and integrity and conservatism, they were of great benefit in many respects. We can remember the time when membership in the typographical union was regarded as a synonym of character and efficiency. In those days employers often preferred to deal with union men rather than with non-union men. But the unions under unwise leadership have proven a great hindrance to the welfare of the laboring man as well as to the country at large. They have limited as far as was possible the apprenticeship, and thus they have forced thousands and hundreds of thousands of boys who ought to have had the opportunity of learning a profitable trade, into idleness; and the idle hand and the idle heart furnish the best workshop in which the devil can carry on his activities.

Labor unions have too often undertaken to override or ignore the moral laws as well as the statute laws. Too many of their members have disregarded the law, "Thou shalt not commit murder," and have murdered fellow laborers because they dared to work without carrying a union card. Honest-

hearted union men have permitted dishonest-hearted radical leaders to destroy the morale of the unions as well as to destroy the morale of many union members. These labor leaders have created an intense bitterness on the part of millions of people in this country against all labor unions. They foisted upon the National Government a disgraceful and dishonest method of work on the part of millions of laboring men engaged in war construction activities, forcing the Government to pay exorbitant prices for idleness rather than for efficiency. They brought on during the war about 5000 strikes involving in the aggregate about 2,000,000 men, or as many as the number of soldiers that we sent to Europe.

While these soldiers, drafted by the Government into service, were risking their health and their lives for the protection of civilization, these laboring men who went on strikes were endangering our success on the battlefield and the lives of the millions of soldiers there.

Under the control of these radical union leaders the whole country has become permeated and saturated with the thought of doing as little work and of getting as much as possible for it. The spirit of efficiency, of producing to the utmost extent of a man's capabilities, giving honest service—heart service not simply eye service—has largely been destroyed by the teachings of union labor leaders.

There are in this country millions of men who do not want to belong to labor unions. They prefer not to be dominated by any organization. These men have just as much right to work unbossed by labor rules as the union men have a right to work unbossed by rules that the non-union men might set up.

We fully recognize the right of these unions to seek to secure the best conditions for their members, but when their teachings are false, when the influence which they exert tends to break down the morale of the country, to keep boys from becoming apprentices and thus fitting themselves for honest employment as trained mechanics, the labor unions become a curse rather than a blessing to the individual man as well as to the country.

If the good men—and there are many of them—who belong to labor unions would assert their rights, kick out of their employment the radical leaders who thrive by creating strife, and bring back the standard of their membership into a guarantee of efficiency and honesty and integrity and faithful work, the country would welcome the opportunity of dealing with such unions.

Sometime ago labor union men were engaged on a building job. One of the men said to another, "If we work slowly we can make this job last through the winter." The other man said, "I am a Christian, and do not propose to be a slacker on my work." He was a good and efficient carpenter, but he soon found that he was unpopular with other members of his union working on that job, his place was soon made vacant and he had to go to another town to find a job.

OCALA, FLA.

REVEREND C. L. Collins, D. D., of Ocala, Fla., calls attention to the fact that in a letter from Orlando published in the MANUFACTURERS RECORD of October 26, it was stated that Ocala was twelve miles west of Orlando. This, of course, was an obvious error. The writer of the letter probably had in mind Ocoee, adds Dr. Collins, as Ocala is some seventy-five or eighty miles from Orlando.

The mistake to which Dr. Collins called attention should have been caught in the office of the MANUFACTURERS RECORD, but through some oversight it was overlooked. Ocala is one of the most thriving cities of Florida. It is a good, long distance away from Orlando. It is a great center of the phosphate industry. It has a number of prosperous banks and many great business institutions. It is indeed, one of the most prosperous and attractive towns in Florida.

VERY IMPORTANT, IF TRUE, BUT IS IT TRUE?

THE Banker and Financier, in its issue of October 15, under the heading, "No Reserve Appointment Until After Election," made some rather suggestive statements, and we take it for granted that that paper must have had cause to believe it knew whereof it was speaking.

In the first place, it said there will be no recess appointment to the governorship of the Federal Reserve Board. In the second place it stated that shortly before Congress adjourned **President Harding informed Senator McLean that he would send Mr. Harding's nomination to the Capitol if he were assured that it would be confirmed, and that an informal poll was conducted with the assistance of the Democrats, and the President was advised not to send in the nomination at that time.** The statement as it appears in the Banker and Financier, is a rather careful presentation of reports which were widespread in Washington as to a poll having been taken of Democratic senators to see if they would join with some Republican senators in confirming Mr. W. P. G. Harding if nominated. On these points The Banker and Financier says:

"There will be no recess appointments to the Federal Reserve Board, the Treasury announces. President Harding is unwilling to designate a governor of the Reserve System while Congress is not in session. This decision has been communicated to Secretary of the Treasury Mellon, and means that the Federal Reserve Board will be without a governor or an eight member at least until Congress reconvenes, late in November or December.

"Four days before the last Congress adjourned the President informed Senator McLean, chairman of the Senate Committee on Banking and Currency, that he would send Mr. Harding's nomination to the Capitol if he were assured that it would be confirmed. An informal poll was conducted with the assistance of the Democrats and the President was advised not to send in the nomination at that time, because it was found that a large number of Senators, favorable to the confirmation of Governor Harding, were absent. This was linked with the fear that the receipt of the nomination would inspire Senator Heflin of Alabama to enter upon an interminable speech, attacking Governor Harding and the Reserve Board's deflation policy, which would seriously interfere with the dispatch of business during the last few days of the session."

THE MAINTENANCE OF LAW ESSENTIAL TO NATIONAL SAFETY.

Delvalle, Travis Co., Tex., October 24.

Editor Manufacturers Record:

I am sending you P. O. money order for \$6.50 to pay for renewal subscription to the MANUFACTURERS RECORD. I would not be without the RECORD's weekly visits if it cost double what it does. I differ with you on the prohibition question. I will admit that humanity at large and in general is a weakling and needs a guardian, but the guardian ought to make some allowances for those who do not need his services and ministrations. While Prohibition is the law I say enforce it rigorously. Those who patronize the liquor runners and bootleggers are equally guilty of the violation of the law and should have the greater penalties inflicted on them.

B. P. TEMPLETON.

Mr. Templeton voices what should be the sentiment of every law-abiding citizen. The MANUFACTURERS RECORD does not question the right of any man to be opposed in sentiment to the prohibition law. It gives to every man the right to decide for himself whether this law or that law is for the best interests of the country—not for his individual interests but for the best interests of the majority of the American people. There are many who do not believe in Prohibition. We do not undertake at any time to denounce them for holding that view, but we do denounce and denounce vigorously the violation of any law merely because a man is opposed to that particular law. He who takes that position uses his influence for the breaking down of all law. We do criticize very actively those who say that the law cannot be enforced

and, therefore, should be repealed, for that is a reflection upon the power of the Federal Government to enforce a constitutional provision that has been ratified by forty-six out of forty-eight states. Whenever a man says that the criminal element of the country is stronger than the Federal Government then he is saying that we have reached a point where our national existence is at stake.

It may take a long time to enforce the prohibition law or to enforce rigorously any other law which is contrary to the views of many people. We have never yet been able to enforce the law against murder or other crimes; for so long as sin rules in the human heart some men will become criminals. But as Mr. Templeton puts it, the prohibition law so long as it stands on the books should be vigorously upheld by every man who believes in law enforcement; and the bootleggers and those who buy the bootleg whiskey should be regarded as criminals and punished accordingly.

One of the chief difficulties in enforcing the Volstead Act and the 18th Amendment is the leniency with which criminals are punished by reason of the leniency of the law itself. It was long the custom in North Carolina, many years before the National Prohibition Law was adopted, to send to the chain gang to work on the public highways every man caught violating the prohibition law of that state, regardless of any social or business standing or political influence. Equally as severe punishment, or confinement for a much longer period in the penitentiary, with a fine large enough to wipe out all profits on the business, should be provided by some amendment to the law in order adequately to punish the criminals who violate this law.

If the United States judges had full authority to fine the bootleggers the full amount of their possible profit, and in addition thereto send them to the penitentiary, at least upon a second offense, a wholesome fear of law would soon be driven into this criminal element and bootleg business would be suppressed. It is because the Federal judges are limited in their power of punishment to so great an extent that the bootlegger does not care for the fines or the short imprisonment which he gets, in the light of the possible profit which he can make out of bootleg whiskey through bootleg whiskey buyers. To all intents and purposes the law as it stands is without teeth. It is so mild that it does not give the judges an opportunity for an adequate punishment to insure the maintenance of the law.

A SAMPLE OF GERMAN EFFORTS TO FLOOD AMERICA.

GERMAN business interests seem determined to flood this country in every way possible with their schemes for selling their products of one kind or another in America. The Texarkana Pipe Works, of Texarkana, Ark., sends us samples of three kinds of envelopes and circular letters recently received by them and their employees, all from Munich. Two of these envelopes were addressed "For the Employees of Texarkana Pipe Works, Texarkana, Ark.," and one simply addressed to the company itself. The words "For the Employees of" are printed, indicating that the concern sending out these envelopes has evidently prepared to mail many thousands of them. All three envelopes contain propositions for the sending of American money for the purchase of materials for the making of alcoholic drinks. One circular offers to send for \$1 a receipt so simple "that a boy of fourteen years can execute them without any difficulty." Another circular from another concern proposes to send for \$3 four packages of material from which fifteen gallons of beverages can be made, and urges people to prepare "for the approaching holidays."

It is quite probable that a great many other concerns are receiving similar circulars, for evidently this country is being flooded with this kind of stuff from Germany.

WAS KELLY AND NOT BESSEMER THE GREATEST METALLURGICAL INVENTOR?

THAT Sir Henry Bessemer himself and not one of his emissaries came to America in the guise of an English workman in order to learn the secret of refining iron by the pneumatic or air process, as discovered by William Kelly and worked out on the banks of the Cumberland River in Kentucky, was revealed recently by William C. Kelly, son of the inventor and now and for many years president of the Kelly Axe Co. of Charleston, W. Va.

The story has been told before, but not in its entirety, and never before under such dramatic circumstances. The occasion was the unveiling at Wyandotte, Mich., of a bronze tablet in memory of the famous iron master and scientist. There were present the delegates to the National Steel Convention in session at Detroit, whence they had come from all parts of the country. The buildings of Wyandotte were draped with flags in honor of the event and 4000 children from the public schools of the city were assembled before the stand of the speaker at the door of the Public Library. This was the spot where William Kelly built the first converter for the manufacture of commercial steel and thus made it possible to develop an industry which has been of incalculable benefit to the advancement of civilization and the comfort and convenience of hundreds of millions of people. But the process is known as the Bessemer process, and the fame which should have come to William Kelly was denied him, and only at this late date has he received even a small fraction of the honor to which his achievements entitled him.

Let William C. Kelly tell the story as related in the Detroit News:

"I have a story unknown to the world.

"It is a story that the man whom you have honored here today, guarded zealously and told to no one except his wife, my mother. He asked that it should not be told.

"But I shall tell it—my father's secret—for the sake of history and of truth.

"It is known to all of you how William Kelly during the courtship of my mother, discovered that the countryside around the little town of Eddyville, Ky., was covered with rich hematite ore.

"He and his older brother, Joseph, established a mill there, bought slaves to operate it, and began the manufacture of steel by the old-fashioned charcoal method.

"You have heard, too, how my father found one day that the slaves had forgotten to replenish the charcoal supply beneath one of the furnaces. He investigated, as you know, and saw that cold air was reaching the melting iron and making it not colder, as he anticipated, but hotter.

"He applied his knowledge of metallurgy to that incident and developed from it the pneumatic, or air process, of refining iron that is now known generally as the Bessemer process.

"Ridicule, however, drove my father into the woods. In secret he built an 'air' mill on the banks of the Cumberland river and experimented there alone until one day two young Englishmen joined him and told him they were workmen. They said his customers in Cincinnati had written to England, asking them to come to America to aid him.

"They were gracious and kindly and my father accepted their services and told them all about his new process. They left him suddenly in the middle of the night.

"You all have read how William Kelly finally applied for patents to cover his process and then learned that Sir Henry Bessemer, an inventor and steel magnate of high standing in England, had already secured the American rights to the air method and was claiming he discovered it independently. My father established his priority rights, but a struggle ensued and he did not meet with financial success.

"And now, my father's secret.

"William Kelly came to Wyandotte and started a mill with the financial assistance of Capt. Eber B. Ward and other Detroit financiers. After a time Ward sent Z. S. Durfee, a trusted employe, to England to endeavor to buy necessary patent rights from Bessemer.

"Durfee came back unsuccessful and reported immediately at my father's house. Among a collection of papers he had

several photographs. He selected one of them and showed it to my father. 'That man,' Durfee said, 'is the famous Sir Henry Bessemer.'

"My father leaned over Durfee's shoulder to look at the picture, then stood erect suddenly and exclaimed, 'My God, Durfee! Bessemer was one of those two English workmen to whom I disclosed my discovery years ago on the bank of the Cumberland.'

"My mother knew that story, and she told it to me as I have told it to you some months before she died."

FLORIDA'S DECREASING TIMBER SUPPLY.

A STATEMENT recently made to the MANUFACTURERS RECORD was to the effect that in 10 or 12 years at the present rate of cutting timber Florida will have no wood left with which to make containers for shipping fruits and vegetables and will have to buy wood for that purpose from Central America or the far West. The business man who said this has been making a careful study of the subject and he added that if the cutover lands in Florida were reforested enough material could be grown in 15 years to supply the requirements of that State for crate material for fruits and vegetables. But he added that the range law or the cattle pasture law which now exists stands in the way of this kind of replanting, and he urged that Florida take some active step to make reforestation a possibility.

OPEN SHOP CONDITIONS TO RULE ON IMPORTANT BUILDING.

THE Chamber of Commerce of the United States merits earnest commendation for its announced determination that the erection of its new \$2,500,000 building in Washington is to be conducted strictly upon open shop terms. An article in the New York Commercial quoted Julius H. Barnes, president, as saying: "The Chamber of Commerce of the United States intends that this national home of American business shall be erected literally on the genuinely open shop plan of employment," and that the specifications for the building contain the following clause:

"The actual construction of the building is to be upon the 'open shop' basis, that is, that union and non-union men shall be employed without discrimination, it being understood that the building committee of the Chamber of Commerce of the United States shall provide such means as in its best judgment will be impartial and disinterested for prompt review and direction with respect to the interpretation and application of this clause. Such decision shall be final and binding."

"This," said President Barnes, "means exactly what it says. It does not mean a closed shop against either organized or independent labor. The Chamber intends that this clause shall be carried out and applied in absolutely good faith, exactly as stated, no more and no less."

It is further noted in the article "that the directors have not been swerved from their purpose to insist upon an open shop basis of employing labor by protests which were made by officials of the American Federation of Labor when the intention of the organization became known last spring."

These facts are most gratifying. The efforts of labor leaders to establish a labor monopoly upon the foundation of union membership have been, in this instance at least, effectually checked. There is no more reason why there should be a labor trust or monopoly than that there should be an industrial trust or monopoly. The latter is forbidden by statute, but owing to weak-kneed lawmakers the principles of the Sherman Act have not yet been applied in the case of labor organizations, although they should so apply to be fair to everyone concerned, especially the public.

CREATING NEW INDUSTRIES IN THE SOUTH, BASED ON NATURAL RESOURCES.

THE South has thought so much in terms of cotton and coal and iron that in some sections cotton manufacturing has absorbed capital and energy to the exclusion of other industries, while in other sections coal and iron have been the dominant features of development work and of the thought of the people. Years ago the vast lumber resources of the South concentrated energy and capital in the cutting down of our virgin forests. But these are only a few of the things to which the South should properly give its attention. There are other resources whose potential value may in the long run equal the possibilities in cotton manufacturing, or in iron and coal.

Typical of what can be done in the development of one of the resources in the South, almost limitless in quantity, is the utilization of Southern clays. A letter from the B. Miffin Hood Brick Co., of Atlanta, manufacturers of pottery and fire brick and face brick, gives some very interesting particulars in regard to the development of that one industry, which should be an inspiration to other people for the establishment of other industries in every part of the South.

Here is a company which has created a new industry and which is pushing its business with such energy that it is meeting the most intense competition from Eastern and Western manufacturers, and is capturing trade not only at home but in foreign lands. The facts given in a personal letter from the B. Miffin Hood Brick Co. are so interesting that we take the liberty of publishing it as a matter of general importance not only to the South but to the country at large. Mr. B. Miffin Hood, president of the company, writes as follows:

"The Hood Brick Company in 1922 have again become pioneers in the South in the manufacture of original burned clay products for the Southern section. This time it is the manufacture of true Mission Roofing Tile from vitrifying shale. This is the first time that this has been successfully done in large quantities in the history of Southern architecture.

"We have been so successful that we have been able to land the order for twelve carloads for the new Colonial Hotel at Nassau, Bahama Islands, and this was done in the face of sharpest competition in New York, where the hotel was designed, and the contract by New York contractors and the delivery in competition to European products, as the destination is that of a British possession.

"We are also shipping fifteen carloads of tile to Mexico and to twenty different states east of the Rocky Mountains. We have never manufactured a burned clay product that has met with so much instant popularity as the production of our shale roofing tile, to imitate the wonderful tile roofs of cities and countries bordering on the Mediterranean.

"Our tiles, according to the advice received from numerous progressive architects, have unlocked to them a new field of design that was hitherto beyond the reach of their clients because true Mission Tiles were not manufactured nearer home than California. We began as pioneers in 1906, when we manufactured for the first time in the Southern States rough texture shale brick under the name of Hood's Orientals, and we are today manufacturing the same product in the same texture, and in the same wealth of color.

"In 1913, we developed our original line of Pottery fireplaces and quarrie Floor tile, and in 1916, built a new plant exclusively for the manufacture of quarrie floor tiles, being the first plant built in the Southern States for the manufacture of this exclusive product.

"In 1917, we began the manufacture as pioneers of chemical stoneware in the South, specializing on the production of 120,000,000 spiral acid rings for the Government, and in 1922 we successfully produced shale roofing tile.

"We are greatly pleased at the number of inquiries that we are getting from the readers of the MANUFACTURERS RECORD of our roofing tile that we are advertising in your medium. Your publication surely reaches the Southern trade intensively.

"Our 1922 business in the manufacture of burned clay products for the building industry has been very successful,

and we look for it to continue equally so if not better in 1923. We believe that other industries will catch up with the building trades and share in their prosperity. We believe that 1923 will be a sane, safe and sure year for a good business in our line. We hope against an inflation like 1920."

THE RAILROADS MUST WIN PUBLIC CONFIDENCE.

COMMENTING on the remarkable work which the Louisville and Nashville Railroad is doing to meet traffic conditions in that section, and bearing especially on the policy of that road in taking the public into its confidence by broad advertising through the daily papers of Alabama, the Birmingham News says:

"The entire series of L. & N. advertisements, covering the past few months, taking the public into the confidence of the management of the road, explaining its purposes, outlining its ideals and declaring its policies, has been a fine thing for both public and railroad. The L. & N., through this series of advertisements, is closer to its public than it has ever been before, in the opinion of The News. It is a great railroad and will be a greater one, through just such far-seeing policies as this open, above-board publicity campaign."

For many years THE MANUFACTURERS RECORD has maintained that if the railroads of the country in times past, instead of trying to buy their way through legislative bodies and getting mixed up in politics, had gone straight to the public in broad, comprehensive advertising through the daily papers and the business papers of the country, they would have won for themselves the confidence of the public which they do not now have. Many millions—yes, many hundreds of millions—of dollars would have been saved to the railroads, and in the aggregate billions of dollars would have been saved to the public if the railroad people had eschewed politics and presented their case directly to the public through broad advertising.

Some 18 or 20 years ago the writer sat in the office of the vice president of one of the biggest railroads in America, and with a friend discussed the political activities of railroads, and the friend said to the vice president, "You know that your road is employing in a certain state as vice president a man who is there for the express purpose of controlling the politics of that state. You know that in another state you have another man (and the names of both of these men were mentioned) who is employed for the same purpose; and the public knows these facts. It knows that you are doing it in other states, and it knows that the railroads generally are doing it. With this method you are sowing the wind and the railroads of the country will reap the whirlwind of destruction unless you change your methods, abandon your political activities, and go straight to the public with a full and frank statement of the railroad side of every case."

The vice president in reply said: "I fully agree with everything that you have said on the subject; but I am not president and cannot control the policy of this road." He frankly admitted that he did not believe in the policy that was being pursued, but declared that he could not change it. That policy was so shortsighted that it is amazing that the railroad people of the country, to a very large extent, under the domination of financial influences in New York which thought and often still think that they can accomplish their ends without taking the public into their confidence, were guilty of it.

Much of the turmoil and unrest of this country today is due to the mistaken policy of big financial interests and to railroad mismanagement in the past. The railroads have had to pay the penalty, and they will pay it for years to come. The sins of the former generation have come down to the present generation, and the most heroic work is required of

this generation of railroad officials to overcome the disastrous results of the harvest, the seed for which were planted by the autocratic, domineering railroad officials of former days. These seeds produced the inevitable fruitage of public hatred to railroad management. THE MANUFACTURERS RECORD never hesitated in years gone by to warn the railroad officials of the certain fructifying power of the seeds that they were planting.

The task of the railroad officials of today is made infinitely harder than it would have been if the officials of the past had been broader visioned and more honest in their methods in dealing with the public. It is possible for the officials of today to forget some of the teachings which they learned from their superior officers of former days, and with an entirely new conception of the relation of the railroads to the people win back public support. But even now many railroad officials are as yet showing that they do not realize how to do this work. They are still too much obsessed with the teachings which they learned from the old railroad methods—teachings which inevitably, so long as their influence is felt, doom the railroads to lack of public confidence, and this dooms the public to lack of transportation.

If any railroad official wants specifications as to the short-sightedness of railroad management in the past he can be easily satisfied with the facts which are always available.

PROHIBITION IN MASSACHUSETTS SHOWN BY COMPREHENSIVE SURVEY TO HAVE BEEN HIGHLY BENEFICIAL.

HOW Prohibition, not yet perfectly enforced, as the author concedes, has nevertheless worked to the immense advantage of the people of Massachusetts, is demonstrated in a pamphlet by Cora Frances Stoddard, secretary of the Scientific Federation, Boston, in a pamphlet, "Wet and Dry Years in a Decade of Massachusetts Public Records." In this volume of 54 pages the statistics of poverty, disease, crime and vice are comprehensively covered, and the plain lesson therefrom is effectively presented.

The survey gives a mass of official statistics, with over 100 tables, comparing the non-prohibition and Prohibition periods. These show that under Prohibition the arrests for drunkenness have been less than one-half; arrests for drunkenness of women, less than one-third; a marked decline in arrests for offences against chastity; commitments to the State Farm, only one-quarter; total prison population, less than one-half; a great decrease in neglected children before the courts; where before Prohibition 18 per cent of the dependent children had drunken fathers and 3 per cent drunken mothers, now only 1 per cent have drunken fathers, and there were no drunken mothers of dependent children in either 1920 or 1921. The school attendance has improved; children are better fed and better clothed; two funds for buying clothing for children who needed it to go to school had no applicants last winter. The family man has largely dropped out from the drinkers' ranks. There has been a great decrease in sex disease, together with a marked gain in the general health of the community. An increase in savings deposits occurred despite industrial depression. The almshouse population is about half, alcoholic insanity has been cut in two and deaths from alcoholism more than cut in two.

In the words of President Charles W. Eliot: "Evidence has accumulated on every hand that Prohibition has promoted public health, public happiness and industrial efficiency. This evidence comes from manufacturers, physicians, nurses of all sorts, school and factory, hospital and district, and from social workers of many races and religions, laboring daily in a great variety of fields. These results are obtained in spite of the imperfect enforcement. This testimony also demonstrates

beyond a doubt that **Prohibition is actually sapping the terrible force of disease, poverty, crime and vice.**

Dr. Richard C. Cabot, Professor of Clinical Medicine, Harvard Medical School, and Professor of Social Ethics, Harvard University, is quoted as declaring: "To the poor, Prohibition in Massachusetts has been a signal blessing. The rich may, for all we know, be as foolish as ever, but beyond any question the poor are better off."

"The survey adjourns the discussion from the region of casual impression and hearsay to that of the comprehensive and total facts," says Robert A. Woods, of the South End House, Boston, formerly member of the Boston Licensing Board and of the Board of Trustees of Norfolk State Hospital for Inebriates. "And it can leave no doubt in the open mind as to what the facts down to date are."

This is probably the most comprehensive survey of the subject that any state has made, and its results must be of value to every sincere investigator of the workings of Prohibition. Because of the large percentage of foreign born population in Massachusetts, and because Massachusetts is so preeminently a manufacturing state, the distinctly favorable results that have followed the outlawing of alcoholic beverages are of especial significance and interest.

BETTER FOR THE BANKER BUT WORSE FOR MANY BANK CUSTOMERS.

IN the recent address of Eugene Meyer, Jr., President of the War Finance Corporation, published by this paper on October 19, there is one paragraph which deserves serious consideration by business and financial people. It is this:

"We are too apt to think of the Federal Reserve System only as adding a new facility and additional resources to our banking structure. But we must not overlook the fact that, while the System has greatly enhanced the desirability of eligible paper, it has correspondingly decreased the desirability of non-eligible paper, even though that paper may be satisfactory in every respect from the standpoint of security."

Mr. Meyer has clearly stated a phase of our present banking system which bodes evil rather than good for the country. The Federal Reserve System has made banking simpler because it enables a banker to take eligible paper and have it rediscounted with the Federal Reserve banks, but it has made business more difficult because unless the bank's customers can turn in eligible paper for rediscount at Federal Reserve banks, it is less desirable to the banker.

The old custom of depending to a large extent upon the moral responsibility of the customer—and especially was this true among the farming districts of the land—is discouraged by the very operation of the Federal Reserve System. Mr. Meyer has rightly sensed the whole situation. Its influence on the prosperity of the country and upon that intimate relationship which existed between bankers and customers, based on moral standing of the customers, in many cases to an extent even larger than on the absolute security offered, may prove rather disastrous in its influence upon the nation's welfare. No banking system which encourages bankers to depend upon gilt edge collateral rather than upon the moral standing and integrity of the customer, can be for the good of the nation. Some remedy for this situation outlined by Mr. Meyer must be found.

The Commercial Pacific Line, operating out of Baltimore, Philadelphia, New York, Los Angeles, San Francisco, Portland, Vancouver and Seattle, plans to make Norfolk a port of call. Hasler & Co. are the Norfolk agents and the present plans are to route one ship per month through the port. More frequent service will be inaugurated if cargo offerings justify it.

Judge Gary Says Pittsburgh Base Is Misunderstood

WAS NOT DEvised AS MEANS OF SECURING UNJUST ADVANTAGE OVER CONSUMER, HE AVERS AT WASHINGTON HEARING—ITS OPERATION NOT INFLEXIBLE AND ITS EFFECT STABILIZES BUSINESS, HE DECLARES.

[Special Correspondence Manufacturers Record.]

Washington, D. C., November 7.

Elbert H. Gary, chairman of the United States Steel Corporation, declared on the witness stand Monday, in the Federal Trade Commission's case against the Corporation, that the Pittsburgh base did not constitute the price at which steel products were sold but was merely a convenient method for quoting prices.

"I deny," he said, "that our Corporation, by authority of those in control, uses the Pittsburgh base or any other rule of trade unconscionably and with a view of seeking advantage over the consumer which is not fair and right. If that had been our policy we would not and ought not to have been allowed by the United States Supreme Court to live."

"The Pittsburgh base was instituted for the purpose of establishing a quoted price. It was adhered to or not in closing a trade, depending on the influence of the law of supply and demand, and that depended on whether business was good or poor. There was nothing fixed—could not be fixed. I think there has been some misunderstanding as to what the Pittsburgh base is. The costs of production, the capacities of plants, the condition of markets, are of course factors, but all the time the question settles down to what the seller is willing to sell and what the buyer is willing to buy.

"I think the law of supply and demand includes the ability and willingness of one to sell at a certain price and the ability and willingness of another to buy at that price. The law of supply and demand is sometimes interrupted by sudden changes in business, mill conditions, and the like. Furthermore, any producer can regulate supply and demand by curtailment of production and any purchaser can do so by refusing to buy."

The Corporation, he averred, has endeavored to get what it believed to be a fair price and to get it honestly. "While it is true," he said, "that the seller will take advantage of location it is nothing to what a purchaser will do in case of great surplus. The Pittsburgh base in practice is measurably forgotten by the Corporation and its subsidiaries most of the time when business is dull. Generally we have quoted prices on the Pittsburgh base and perhaps have sold more than the average of our competitors on the Pittsburgh base, but when business is dull the Corporation has absorbed a part of the freight at least, depending on their desire to secure the business, but I would state that competitors have absorbed the greater part of it."

The Pittsburgh base, declared the witness, does not fix a price which is maintained regardless. It does not mean that that phase is overlooked—it never has been—but in time of stress the law of supply and demand will not permit it. Questioned by the Commission's attorney as to whether the sale of steel in the Illinois territory by the Carnegie Steel Company, plus freight from Pittsburgh, in 1921, when the plant of the Illinois Steel Company was partly closed down, was in consonance with the law of supply and demand, Mr. Gary replied that he was inclined to think it was.

"I would be surprised, however," said Judge Gary, "to find that the Pittsburgh people would deliberately go into a district of another subsidiary and try to get that business from the local producer under ordinary circumstances. There is no active competition between the Carnegie and Illinois Steel companies beyond the good-natured competition that

is permitted in order to influence each company to do its best."

"Taking your statement that the Carnegie Steel Company's price in Chicago, plus freight from Pittsburgh, is generally regulated by supply and demand, does that mean that tonnage must come from Pittsburgh?" asked the Commission's attorney.

"That sometimes may or may not be the fact," replied Judge Gary.

"To be successful business must have stability and the buyer is aided when he knows what the ordinary rule is for fixing prices," stated Judge Gary, in explaining that this briefly was the function of the Pittsburgh base system of quotations. Neither that nor supply and demand are unchangeable, he insisted.

"You claim," he said, addressing the Commission's attorney, "that the Pittsburgh base makes an arbitrary rule, and it seems to me if that was an unyielding, unchangeable rule, there would be force in your argument but then comes in the law of supply and demand with its natural adjustment that protects all parties."

"Chicago is not paying any more for steel on the average than Pittsburgh," he continued. "The Pittsburgh base is not important to the Corporation but is important to the independents in Pittsburgh, who cannot afford to sell in Chicago at the price obtained in Pittsburgh." Stating that he was not arguing for retention of the Pittsburgh base on behalf of the Corporation, he said that he could not advise a change from what seemed to be a natural course of business. The Corporation had nothing to do with its establishment; its origin rested in the fact, he presumed, that Pittsburgh for years had been the point of greatest surplus production and therefore dominated the market.

Take away the Pittsburgh base, he said, and the mills in new locations such as Duluth, if they were not permitted to charge the Pittsburgh price plus freight from Pittsburgh, would be cleaned out.

"You wouldn't have seen this business built up at Chicago, Birmingham, Duluth or various other places without the Pittsburgh base, he said. On the other hand he declared that when the cost of production in those new localities should approximate that of Pittsburgh the Pittsburgh base would vanish.

He stated that business was pretty good now but even if competition would permit the application of the Pittsburgh base, the returns on approximately two and one-quarter billions invested would not be very large. Labor consumed 90 per cent and with the high cost of living labor rates were not too high and could not be reduced, he explained.

"We are going to have prosperity in this country. What we want is stability of business, not only for ourselves but for our workmen and customers. I believe that the Pittsburgh base is an element in the stability of business for the benefit of all. I know that independent producers will disagree with me but we are looking to the greatest good of business," he stated in concluding his testimony, "which has been very much better since the organization of the Corporation and its stabilizing influence."

The Corporation's counsel did not cross-examine Judge Gary. He will return to Washington for this purpose on November 15.

Norfolk Setting a Lively Pace in Construction Activities.

TYPICAL OF THE PROGRESS IN EVIDENCE THROUGHOUT THE SOUTH.

By CARROLL E. WILLIAMS

Norfolk, Va., October 31.

This city has a building and construction program under way and in sight involving the expenditure of close to \$25,000,000.

Among the projects now under way, just nearing completion or actually in sight are the following:

National Bank of Commerce.....	\$300,000
J. E. B. Stuart School.....	133,000
Virginian Railway pier and terminals.....	3,000,000
Norfolk & Western terminal improvements.....	2,500,000
Chesapeake & Ohio terminal improvements.....	3,500,000
City paving program.....	1,000,000
Water works improvements.....	4,000,000
Wells-Wilmer-Vincent theater.....	150,000
United States Public Health Service Hospital.....	1,000,000
City auditorium.....	750,000
Municipal grain elevator and auxiliary improvements.....	1,000,000
Municipal pier.....	750,000
Municipal market building.....	500,000
Third Christian Church.....	160,000
United Owners Realty Corp. building.....	165,000
Building permits issued in 9 months.....	3,150,000
Negro industrial school building.....	500,000

All this work is going forward or being planned without any big demonstration. In fact, leading citizens and men in position to know what is going on within the city were astonished when THE MANUFACTURERS RECORD correspondent called their attention to the big aggregate expenditure represented by the projects listed above. They knew of these activities individually but the combined program had possibly never been presented.

The city has \$5,000,000 available for municipal water front terminal facilities. Contract for a new pier has just been awarded to cost about \$700,000, and the 1,000,000 bushel grain elevator will be placed in operation shortly. Additional facilities at the Army Supply Base, including piers and warehouses will be taken over by the city as soon as negotiations under way are consummated. Efforts are being made to provide a 40-foot channel to Newport News. Dredging is under way near the grain elevator, and the War Department work of this character is progressing. In carrying forward its waterfront development Norfolk aims to have the facilities here and then attract the necessary interests to use them, and not wait for the interests to seek them.

With work under way on \$2,500,000 pier improvements of the Norfolk and Western and with work to be started soon on the Virginian Railway pier to cost \$3,000,000, there is talk of an expenditure of say \$3,500,000 for similar work by the Chesapeake & Ohio. J. T. Nuckols has the general contract for a pier now being erected by the Chesapeake & Ohio to cost about \$150,000. S. G. Williams is placing the foundations and piles.

The H. D. Watts Co., of Norfolk and Baltimore, have just completed the Junior Western High School, 311 by 137 feet and 45 feet high costing \$600,000 and the Eastern Junior High School, costing about \$575,000. Benj. Mitchell is preparing plans for a negro industrial school to cost \$500,000. The Miller Engineering Corporation has the general contract for the J. E. B. Stuart school building addition to cost \$133,000. It will be 180 by 73 feet and 37 feet high, of reinforced concrete and steel.

The National Bank of Commerce is erecting a 13-story addition, 23 by 135 feet, at a cost of about \$300,000. E. W. Minter Co., Inc., New York, have the general contract.

The city's paving program this year will involve the expenditure of \$1,000,000, according to W. E. Rew, engineer of highways and bridges. On Nov. 25, 10,000 additional yards of paving will be placed under contract. Work is now proceeding on plans for the 1923 program. This year about 50 per cent of the paving work was done by the city's own forces under its own engineers with very good results.

Finishing touches are being placed on the new \$4,000,000

water system being completed under the direction of David A. Decker, water engineer.

An addition costing \$165,000 is being built by The H. D. Watts Co. to the Law Building. It is 7 stories high of brick, steel and concrete.

The same company is building a structure for the Third Christian Church. It will be 93 by 136 feet, 37 feet high, of brick and stone, with slate and slag-gravel roof, containing 10,000 square feet of floor space on two floors.

The United States Public Health Service Hospital in Larchmont, which will be within the city limits after January 1, was recently completed at a cost of about \$1,000,000.

Plans are being formulated for the erection of a city auditorium to cost \$750,000, and it is hoped that actual construction work will be under way shortly after January 1. A site has not yet been selected.

According to W. H. Jenkins, Jr., of the Chamber of Commerce, the recent annexation of a large area surrounding Norfolk, to take effect January 1 will mean much towards the future development of the city. It will increase the population to 155,000, and the area will be more than doubled. A large part of it is vacant land lying between settled communities, and plans for intelligent zoning and city planning are being discussed. In 1913 there were 6 to 8 export sailings from the port monthly. Now there are 50 to 65, states Mr. Jenkins.

The new water supply will be sufficient for industries and domestic use of a city of 1,000,000 people, and it is believed that this will do much to attract new residents and industrial plants here.

Birmingham Auditorium to Cost \$400,000—Plans Accepted.

Birmingham, Ala., November 1—The City Commissioners, D. E. McLendon, President, have selected tentative plans prepared by H. D. Breeding of Birmingham for the proposed municipal auditorium. The building will be of the arena type, seating from 8500 to 9000 on the first floor, and will cost \$400,000. It will be of fireproof construction with a steel frame and outside walls of brick and hollow tile, trimmed in terra-cotta.

All interior walls will be finished in cement plaster, while the ceilings will be of asbestos board and the lobbies and vestibules laid with tile floors and marble wainscotings. The ground floor will be a combination of bowl and arena, the latter being 120x160 feet. A large committee room seating 600 will be located on the mezzanine floor. From this mezzanine fourteen stairways will lead to the galleries.

The heating plant will consist of low pressure steam for warming pure washed air, which will be thrown into the room at the main corners by a blower system and carried off at convenient points. This system is expected to be of sufficient capacity to assure a change of air every twenty minutes.

Working drawings for the building will be prepared as rapidly as possible so the commission may be in a position to invite bids within thirty or sixty days.

Additional Power Plant Unit to Cost \$2,800,000.

Dallas, Tex., November 2—[Special.]—Arrangements have been made by the Dallas Power & Light Co. to begin about January 1 the construction of an additional unit of its power plant to cost \$2,800,000.

A Vigorous Protest Against the Hoarding of Gold, in Harmony in That Respect With Sir George Paish and the Department of Commerce.

[Bearing on the question of the piling up of a large part of the world's gold supply in this country, is an interesting statement by Sir George Paish, the English economist while in this country a few weeks ago, in the course of which, referring to this subject, he said:

"This tends to stifle world trade. Were this money at work you would have easy money in this country."

And in a report from the Department of Commerce, presided over by Mr. Herbert Hoover, discussing the import and export trade of the United States, appears this statement:

"Our gold stocks amount to about \$3,077,000,000. Of this, the minimum legal necessities at the moment for assurances to our currency and credits amount roughly to about \$1,600,000,000, but for a 60 per cent reserve of security, we would require about \$2,400,000,000. Therefore, our surplus amounts to somewhere over \$700,000,000. While this is an asset, it nevertheless would be more advantageous to us if it were in active use."

The views expressed by the Department of Commerce, voicing the sentiment of Mr. Hoover, and those expressed by Sir George Paish, are in very close harmony with some of the facts presented in the following letter.—Editor Manufacturers Record.]

BY JAMES A. MARTIN, Johnson City, Tenn.

I have been in constant touch with your able editorials relative to the management of the Reserve banks, and with respect to deflation, and the effects that it would have upon this nation, from every angle of business, both as to farming, manufacturing, and all lines of human endeavor.

In every instance your views have been absolutely proven to be correct, as shown by events and conditions that have come about as you have steadily predicted from time to time.

Deflation brought on the past three years' panic, just as you said it would. If continued, the same results that you predicted will steadily continue from day to day.

Deflation, with interest rates run up to 7 per cent, cut the market value of United States bonds to 82 cents on the dollar.

Deflation has caused the Government to pay as high as 6.55 per cent for short time loans, besides destroying values of not less than fifty billions of dollars.

Deflation did not reduce the Government debt one dollar, neither did it reduce individual debts, state, city, nor county taxes one dollar.

Deflation wiped out large business demands for money, and forced money into non-tax-paying bonds, to the detriment of all kinds of business, and finally when deflation was halted and interest rates were reduced by the Reserve banks, United States bonds climbed steadily to par.

While deflation has been halted, it is not as dead as should be hoped for.

Another iniquitous and damnable policy has been established by the Reserve banks, that is as damaging as deflation.

I refer specifically, to the hoarding and non-use of the billions of gold that has flowed into this country for the past several years.

In round numbers the Reserve banks statement showed the enormous gold hoard of \$3,100,000,000.00 in gold, while their total earning assets, were but a little more than a billion dollars.

The effect of such a criminal manipulation of this gold wealth, and its non-use, is the most damaging thing that today holds this country back and away from prosperity.

Money measures all values, and those who manipulate and control it, either through their management of said Reserve banks or otherwise, fix all values, for every farm product, every manufactured article, and even the dollar itself.

They have more power today, than any king that ever sat upon his throne.

The manner in which this power has been used for the past three years was solely in the interest of the big money lenders, and the Wall street gamblers.

Today these Reserve banks are carrying about 80 per cent

of gold "to secure deposit liabilities." Also about 80 per cent gold to secure Reserve Bank note circulation.

This is what I call criminal management. It robs the debtor, it fails to reduce the bonded debt of our nation, or of any city, state, county or individual, but does reduce the value of everything that must be sold to pay the least part of said debts.

If this gold was honestly used as any banker would use it, if he owned it, and put out at lower interest rates, the farmers of this country would get fair prices for their farm products, and would not be robbed and forced to mortgage their farms for 7½ to 20 per cent money.

Money is cheap in New York for certain purposes and to certain corporations and individuals, but it is high in the South and West.

Some time ago I wrote a letter to Mr. D. R. Crissinger, Comptroller, and asked him why the Reserve banks cancelled \$259,000,000 in January, 1922, when they knew that the Treasury would float a loan of \$400,000,000 in February, 1922 for which it had to pay 4¼ per cent interest. I got no answer to this.

Later on, more Reserve Bank money had been cancelled, running into the millions of dollars, and our Government has had to pay 4¼ per cent interest rather than issue the 2 per cent bonds that would have sold for par, to the amount of a billion dollars, which you so wisely advocated in your late issue.

Will you tell me why it is, that the national banks of New York City, could today issue \$330,000,000 of national bank money on their capitalization, and United States bonded security, and loan that money and make a fair rate of interest, but instead of doing this, they only took out or issued \$30,000,000 of such money?

I am strongly opposed to the issuance of a single dollar of unsound money, and I am just as strongly opposed to the hoarding of three dollars in gold, for every dollar of "earning assets" as now held by the said Reserve banks.

The gold that lies idle in the vaults of these Reserve banks would reduce interest rates to a fair basis for farmers, and every known business that deserves lower interest rates, if it was used as it should be, and not locked up in dark and unseen vaults.

I contend that because of the immense flow of gold to this country, that we never should have slowed down business, of any description whatever, but should have used that gold to have kept the wheels greased and in fine running condition.

In the face of the endorsement of the Wall street crowd, for the re-appointment of W. P. G. Harding, I wish to thank our own President, His Excellency, Warren G. Harding, for having the wise insight, and the strong and manful will not to allow any such a man as W. P. G. Harding to run the

affairs of this nation, along the lines and plans of wreck and ruin.

He should have been removed many months ago, as you showed quite awhile ago, in one of your letters to President Harding.

Again, I wish to emphasize the wisdom, fairness and justice that our own President has exhibited in refusing to re-appoint this man, who is so disliked by millions of our business men.

I pray that he may not appoint Vice-President Platt, or any other deflationist to the high position of chairman of the Reserve Board. That would be a calamity.

I endorse with all my heart and mind your plan to issue a billion or more dollars of 2 per cent Government bonds, in order that national banks of issue may buy them and use them to increase our low pro rata circulating medium in the form of national bank notes.

This would bring prosperity back to us in a rush, and we would not have to tell a lie and say that "Prosperity is just around the corner."

The people of this nation owe you a debt of constant gratitude for your able and manly editorials against the management of those banks that have caused all the financial trouble that we have been heir to.

They owe President Harding a debt of unending gratitude for halting deflation, that has robbed them of billions of actual wealth.

I am a Democrat, but I want to endorse all that is honest, fair and right, and denounce all that is wrong.

Under date of October 31, Mr. Martin adds:

"Since my letter to you of October 27, I have received and herewith enclose to you the joint and combined statement of the 12 Federal Reserve banks, dated October 25, 1922.

This report shows that every item of banking business covering discounts, government paper, deposits, and note issues, all show lower totals.

"This report shows a net 'liquidation' of about \$80,000,000 for this one week ending October 25.

"It shows a deflation, or cancellation of \$16,900,000 inside of that one week, and when the two preceding weeks are added it shows a total deflation of the volume of money that we have in this country of about \$27,000,000.

"That \$50,000,000 in gold that England paid us a few days ago was hoarded and buried out of sight, and has done the business of this country about as much good as would that much of any kind of a worthless substance.

"You will notice that these twelve Reserve banks now hold 77.6% gold, to secure deposit liabilities.

"Also 77.6% gold to 'secure Federal Note liability.'

"Please also notice that the total gold held is \$3,085,083,000, and that total earning assets are only \$1,135,753,000, which is practically \$3 in gold for every dollar that is earning anything.

"During the week of this deflation policy, as shown in actual figures, by their own report, Wall Street has managed to cut the price of the last 4¼% Bonds to 99 cents.

"The same damaging cut has been made to every line of business in America.

"Is there not some mistake about President Harding being very strongly against 'drastic deflation'?"

"If he is as strongly against it as you claimed in your last editorial on this subject, why don't he dismiss the men that continue this drastic deflation?"

"Deflation means to reduce, and this is what is being done to his party and to all kinds of business.

"Deflation, contraction, subtraction, bankruptcy and liquidation, are all the same terms and conditions that we are now having."

Purchases 104 Acres of Coal Land.

Morgantown, W. Va., October 27—[Special.]—The Brown Coal Co. of Uniontown, Pa. has purchased from Cole Bros. of Morgantown 104 acres of Pittsburgh coal land in Bear Mountain district of Barbour county for a consideration of \$100,000. The property will soon be developed and a tipples constructed.

NEW BALTIMORE & OHIO GRAIN ELEVATORS. Storage Capacity at Locust Point from 3,000,000 to 8,000,000 Bushels.

The Baltimore & Ohio Railroad Co. has commissioned John S. Metcalf Co. of Chicago to prepare plans and specifications for its grain elevator at Locust Point, Baltimore, to replace two elevators burned last summer. Tentative plans, which have been worked out by Baltimore & Ohio officials, provide for a steel concrete elevator of the most modern type and storage bins of 3,000,000-bushel capacity, so arranged that the capacity may be readily increased to 8,000,000 bushels. The plans include complete facilities for drying and cleaning grain and for unloading it from boats. Approved safeguards against dust explosion will also be used.

The elevator will be constructed at the water's edge adjacent to piers, with galleries and belt conveyors reaching eight berths, four of which will be located on an exclusive grain-loading pier to be constructed for that purpose, the other four on a 2-story merchandise pier already in use. Provision will be made for extending the gallery system to other piers in the future.

It is expected that detailed plans will be ready for submission to the railroad engineers within three months, after which bids for construction will be invited. Construction work will be under the direction of H. A. Lane, Chief Engineer of the Baltimore & Ohio Railroad Co., assisted by L. P. Kimball, Engineer of Buildings, who will have immediate supervision and will be associated with L. A. Stinson of Chicago, as consulting engineer.

English Cotton Industry Proposes Scheme to Sectionalize American Spinning.

[Special Correspondence Manufacturers Record.]

Manchester, October 23.

A few weeks ago a Provisional Emergency Committee (representing about £50,000,000 capital), was formed by certain Lancashire cotton spinners with the idea of formulating some scheme whereby the severe depression of the cotton spinning industry of England could be overcome. The committee has met several times under the chairmanship of Sir Charles W. Macara, one of the leaders of the industry, and conferences have been held with the Federation of Master Cotton Spinners' Associations. The matter has been brought to a head and definite proposals for the "sectionalizing" of the American section of the Lancashire cotton spinning industry have now been submitted to the big Federation, and members are asking to vote on two alternative schemes, one principle common to both being that ring spinners are to form one section and mule spinners another.

If the suggestion is carried it will mean fixing minimum prices for yarn in each section. Under the first scheme it is then proposed to split the sections into three classes, spinners of coarse, medium and fine counts. The second plan does not provide for such a sub-division of the sections, only two classes being proposed, namely spinners of coarse counts up to 24's, and spinners of all other counts.

On the Manchester Royal Exchange the opinion is that it is very questionable whether such a scheme will be carried by vote. The problems connected with the working of any plan such as that suggested above in an industry so complicated and so "individual" as that of cotton spinning are very great. On the other hand, however, it is generally agreed that the existing method of curtailing production on two days a week as in the American section of the industry is not altogether a success. The scheme looks very well on paper, but it is another matter whether it can be made practicable. At any rate, many well-known spinners are willing to give it a trial.

Immigration and Degradation.

[In his presidential address before the American Economic Association, December 26, 1890, entitled "The Tide of Economic Thought," Gen. Francis A. Walker, twice Superintendent of the United States Census, dwelt with renewed earnestness upon the problem of immigration. During the immediately succeeding years he spoke and wrote much upon this subject. The following article, published in the Forum, of August, 1891, is devoted to a study of the foreign elements from the standpoint of statistical analysis, in which Gen. Walker undertook to prove that foreign immigration had brought about a decrease in the birth rate of native white American stock—Editor Manufacturers Record.]

By GENERAL FRANCIS A. WALKER.

To me, as a student of the American census, the statistics of the foreign elements of our population have had a peculiar interest. To note the first appearance, in the web of our national life, of these many-colored threads; to watch the patterns which they formed as they grew in numbers during the successive stages of our development, was always a fascinating study. But, curious and even instructive as are inquiries into the varying aptitudes, as to residence and occupation, manifested by the several foreign nationalities represented among us, or into their varying liabilities to different forms of disease, of physical infirmity, or of criminal impulse, I shall confine myself in this paper to speaking of the influence exerted by our foreign arrivals upon the native population in the past, and to considerations arising upon the contemplation of the overwhelming immigration of the present time.

False and absurd as are many of the views prevalent in the Old World regarding things American, there is no other particular in which European opinion has been so grotesquely in the wrong, as in respect to the indebtedness of the population of the United States to continuous immigration from abroad. Conclusions have been announced and unhesitatingly accepted in Europe, and, indeed, copied and repeated long without contradiction here, which are of the most astonishing character, in the highest degree derogatory to the vitality of our native American stock, and to the sanitary influence of our climate. Thus, Mr. Clibborne, in a paper entitled, "The Tendency of the European Races to Become Extinct in the United States," read before the British Association for the Advancement of Science, in 1856, stated the following stupendous result of his investigation:

"From the general unfitness of the climate to the European constitution, coupled with occasional pestilential visitations which occur in the healthier localities, on the whole in an average of three or four generations, extinction of the European races in North America would be almost certain if the communication with Europe were entirely cut off."

In speaking of entirely cutting off communications with Europe, Mr. Clibborne did not, could not, mean such a painful severance of relations as would deny the American people the privilege of studying their own character and manners in the discriminating, dispassionate, yet genial narratives and essays of a Mrs. Trollope or a Lepel Griffin; but only such restriction of intercourse as would not put a stop to Europeans coming hither, as seals resort to the Alaskan islands, to deposit their young, the proper fruit of more benignant climes. Were this constantly renewed supply of fresh blood from other lands cut off, Mr. Clibborne declared, the white race on this continent would soon become extinct.

With the readiness so characteristic of Europeans to swallow any opinion or statement of fact regarding Americans, provided only it be sufficiently disparaging, it is not to be wondered at that millions of Englishmen, Frenchmen and Germans should have been found to believe and to repeat it; but, unfortunately, similar conclusions were at about the same time promulgated by two persons resident in the United States, assuming the air, at least, of careful sociological investigators. In the same year that Mr. Clibborne's paper was read, Mr. Louis Schade, of Washington, put for-

ward some elaborate statistical computations to establish the proposition that the rate of natural increase in the descendants of the original population of the United States, in 1790, had, by that time, been reduced to 1.38 per cent per annum. Vastly the greater part of the mighty increase which had raised the four millions of 1790 to the twenty-eight millions of 1856, Mr. Schade attributed to the fecundity of the immigrants into the country subsequent to 1790. I trust that it is not below the dignity of this magazine to allow me to say that Mr. Schade's elaborate demonstration of the decay of reproductive vigor among the elder population of the United States was simply bosh. Blunder had been piled upon blunder, to reach this Olympian height of absurdity. Yet so lacking was this country in trained statisticians competent to deal with such a piece of charlatanry that Mr. Schade's conclusions remained unchallenged at home, and were widely circulated abroad, to the confusion of all good Americans.

In 1870, Mr. Frederic Kapp, a scholar and a man of some pretensions to statesmanship, read a paper before the American Social Science Association, in which he warmly supported Mr. Schade's views, giving that person much credit for his original and penetrating methods of statistical analysis. Original they certainly were. Mr. Kapp proceeded, by methods entitled to equal praise on the same account, to complete the work in this field, reaching the conclusion that, of the population of 1850, but 36 per cent, and of the population of 1860, but 29 per cent, were American, in the sense of being derived from the inhabitants of 1790, all the vast remainder consisting of the survivors or the descendants of immigrants since that date.

By this time it was not so easy or safe an exploit to pluck the feathers of the American eagle. Statistics had begun to be cultivated in a small way here; and Kapp's performance called forth a reply from the late Dr. Edward Jarvis, the first president of the American Statistical Association. Dr. Jarvis' paper will be found in the Atlantic Monthly for 1872. In it he completely demolished the flimsy structures which Schade and Kapp had reared. Time will not serve to follow Dr. Jarvis' exposure of the successive statistical blunders which had allowed conclusions so disparaging to the vitality of our people. Two instances will suffice. Mr. Schade had confounded the number of children surviving at the end of a year with the number of children born during the year; the fact being that from 109 to 115 or more children (according to the conditions of infant life prevailing in the community) must be born during a year, in order that 100 shall survive at the end of it. Mr. Kapp, on his part, had to his own satisfaction established a natural increase of the foreigners supposed, in the absence of exact data, to have survived in the country between 1790 and 1800, which would have required every female among them to bear 1807 children each year, to satisfy the requirements of the assumption. Dr. Jarvis reached the conclusion that of the population of 1850, more than 80 per cent, and of the population of 1860, more than 71 per cent, were American in the sense given to that word by Mr. Kapp, instead of only 36 and 29 per cent, respectively, according to the deductions of that writer.

Now, it is to be freely admitted that between 1850 and

1870 the rate of increase in the pre-existing population of this country fell sharply off; and that between 1870 and 1890 that decline has gone on at an accelerated ratio. From the first appearance of foreigners in large numbers in the United States the rate of increase among them has been greater than among those whom they found here; and this disproportion has tended continually, ever since, to increase. But has this result been due to a decline in physical vitality and reproductive vigor in that part of the population which we call, by comparison, American, or has it been due to other causes, perhaps to the appearance of the foreigners themselves?

This is a question which requires us to go back to the beginning of the nation. The population of 1790 may be considered to have been, in a high sense, American. It is true that (leaving the Africans out of account) it was all of European stock; but immigration had practically ceased on the outbreak of the Revolution, in 1775, and had not been renewed, to any important extent, at the occurrence of the first census; so that the population of that date was an acclimated, and almost wholly a native, population. Now, from 1790 to 1800, the population of the United States increased 35.10 per cent, or at a rate which would have enabled population to be doubled in twenty-three years; a rate transcending that maintained, so far as is known, over any extensive region for any considerable period of human history. And during this time the foreign arrivals were insignificant, being estimated at only 50,000 for the decade. Again, from 1800 to 1810, population increased by 36.38 per cent. Still the foreign arrivals were few, being estimated at only 70,000 for the ten years. Again, between 1810 and 1820 the rate of increase was 33.07 per cent, and still immigration remained at a minimum, the arrivals during the decade being estimated at 114,000. Meanwhile, the population had increased from 3,929,214 to 9,633,822.

I have thus far spoken of the foreign arrivals at our ports, as estimated. Beginning with 1820, however, we have custom-house statistics of the numbers of persons annually landing upon our shores. Some of these, indeed, did not remain here; yet, rudely speaking, we may call them all immigrants. Between 1820 and 1830, population grew to 12,866,020. The number of foreigners arriving in the ten years was 151,000. Here, then, we have for forty years an increase, substantially all out of the loins of the four millions of our own people living in 1790, amounting to almost nine millions, or 227 per cent. Such a rate of increase was never known before or since, among any considerable population, over any extensive region.

About this time, however, we reach a turning-point in the history of our population. In the decade 1830-40 the number of foreign arrivals greatly increased. Immigration had not, indeed, reached the enormous dimensions of these later days. Yet during the decade in question, the foreigners coming to the United States were almost exactly fourfold those coming in the decade preceding, or 599,000. The question now of vital importance is this: Was the population of the country correspondingly increased? I answer, No! The population of 1840 was almost exactly what, by computation, it would have been had no increase in foreign arrivals taken place. Again, between 1840 and 1850, a still further access of foreigners occurred, this time of enormous dimensions, the arrivals of the decade amounting to not less than 1,713,000. Of this gigantic total, 1,048,000 were from the British Isles, the Irish famine of 1846-47 having driven hundreds of thousands of miserable peasants to seek food upon our shores. Again we ask, did this excess constitute a net gain to the population of the country? Again the answer is, No! Population showed no increase over the proportions established before immigration set in like a flood. In other words, as the foreigners began to come in larger num-

bers, the native population more and more withheld their own increase.

Now, this correspondence might be accounted for in three different ways. (1) It might be said that it was a mere coincidence, no relation of cause and effect existing between the two phenomena. (2) It might be said that the foreigners came because the native population was relatively declining, that is, failing to keep up its pristine rate of increase. (3) It might be said that the growth of the native population was checked by the incoming of the foreign elements in such large numbers.

The view that the correspondence referred to was a mere coincidence, purely accidental in origin, is perhaps that most commonly taken. If this be the true explanation, the coincidence is a most remarkable one. In the June number of the Forum, I cited the predictions as to the future population of the country, made by Elkanah Watson, on the basis of the censuses of 1790, 1800, and 1810, while immigration still remained at a minimum. Now, let us place together the actual census figures for 1840 and 1850, Watson's estimates for those years, and the foreign arrivals during the preceding decade:

	1840	1850
The census.....	17,069,453	23,191,876
Watson's estimates	17,116,526	23,185,368
The difference	-47,073	+6,508
Foreign arrivals during preceding decade.....	599,000	1,713,000

Here we see that, in spite of the arrival of 599,000 foreigners during the period 1830-40, four times as many as had arrived during any preceding decade, the figures of the census coincided closely with the estimate of Watson, based on the growth of population in the pre-immigration era, falling short of it by only 47,073 in a total of 17,000,000; while in 1850 the actual population, in spite of the arrival of 1,713,000 more immigrants, exceeded Watson's estimates by only 6508 in a total of 23,000,000. Surely, if this correspondence between the increase of the foreign element and the relative decline of the native element is a mere coincidence, it is one of the most astonishing in human history. The actuarial degree of improbability as to a coincidence so close, over a range so vast, I will not undertake to compute.

If on the other hand, it be alleged that the relation of cause and effect existed between the two phenomena, this might be put in two widely different ways: either that the foreigners came in increasing numbers because the native element was relatively declining, or that the native element failed to maintain its previous rate of increase because the foreigners came in such swarms. What shall we say of the former of these explanations? Does anything more need to be said than that it is too fine to be the real explanation of a big human fact like this we are considering? To assume that at such a distance in space, in the then state of news-communication and ocean-transportation, and in spite of the ignorance and extreme poverty of the peasantries of Europe from which the immigrants were then generally drawn, there was so exact a degree of knowledge, not only of the fact that the native element here was not keeping up its rate of increase, but also of the precise ratio of that decline, as to enable those peasantries, with or without a mutual understanding, to supply just the numbers necessary to bring our population up to its due proportions, would be little less than laughable. To-day, with quick passages, cheap freights, and ocean cables, there is not a single wholesale trade in the world carried on with this degree of knowledge, or attaining anything like this point of precision in results.

The true explanation of the remarkable fact we are considering, I believe to be the last of the three suggested. The access of foreigners, at the time and under the circum-

stances, constituted a shock to the principle of population among the native element. That principle is always acutely sensitive, alike to sentimental and to economic conditions. And it is to be noted, in passing, that not only did the decline in the native element, as a whole, take place in singular correspondence with the excess of foreign arrivals, but it occurred chiefly in just those regions to which the newcomers most freely resorted.

But what possible reason can be suggested why the incoming of the foreigner should have checked the disposition of the native toward the increase of population at the traditional rate? I answer that the best of good reasons can be assigned. Throughout the northeastern and northern Middle states, into which, during the period under consideration, the newcomers poured in such numbers, the standard of material living, of general intelligence, of social decency, had been singularly high. Life, even at its hardest, had always had its luxuries; the babe had been a thing of beauty, to be delicately nurtured and proudly exhibited; the growing child had been decently dressed, at least for school and church; the house had been kept in order, at whatever cost, the gate hung, the shutters in place, while the front yard had been made to bloom with simple flowers; the village church, the public schoolhouse, had been the best which the community, with great exertions and sacrifices, could erect and maintain. Then came the foreigner, making his way into the little village, bringing—small blame to him!—not only a vastly lower standard of living, but too often an actual present incapacity even to understand the refinements of life and thought in the community in which he sought a home. Our people had to look upon houses that were mere shells for human habitations, the gate unhung, the shutters flapping or falling, green pools in the yard, babes and young children rolling about half naked or worse, neglected, dirty, unkempt. Was there not in this a sentimental reason strong enough to give a shock to the principle of population?

But there was, besides, an economic reason for a check to the native increase. The American shrank from the industrial competition thus thrust upon him. He was unwilling himself to engage in the lowest kind of day-labor with these new elements of the population; he was even more unwilling to bring sons and daughters into the world to enter into that competition. For the first time in our history, the people of the free states became divided into classes. Those classes were natives and foreigners. Politically, the distinction had only a certain force, which yielded more or less readily under partisan pressure; but socially and industrially that distinction has been a tremendous power, and its chief effects have been wrought upon population. Neither the social companionship nor the industrial competition of the foreigner has, broadly speaking, been welcome to the native.

It hardly needs to be said that the foregoing descriptions are not intended to apply to all of the vast body of immigrants during this period. Thousands came over from good homes; many had had all the advantages of education and culture; some possessed the highest qualities of manhood and citizenship.

But let us proceed with the census. By 1860 the causes operating to reduce the growth of the native element—to which had then manifestly been added the force of important changes in the manner of living, the introduction of more luxurious habits, the influence of city life, and the custom of "boarding"—had reached such a height as, in spite of a still-increasing immigration, to leave the population of the country 310,503 below the estimate. The fearful losses of the civil war and the rapid extension of habits unfavorable to increase of numbers make any further use of Watson's computations uninteresting; yet still the great fact protrudes

through all the subsequent history of our population that the more rapidly foreigners came into the United States the smaller was the rate of increase, not merely among the native population separately, but throughout the population of the country, as a whole, including the foreigners. The climax of this movement was reached when, during the decade 1880-90, the foreign arrivals rose to the monstrous total of five and a quarter millions (twice what had ever before been known), while the population, even including this enormous re-enforcement, increased more slowly than in any other period of our history, except, possibly, that of the great civil war.

If the foregoing views are true, or contain any considerable degree of truth, foreign immigration into this country has, from the time it first assumed large proportions, amounted, not to a re-enforcement of our population, but to a replacement of native by foreign stock. That if the foreigners had not come the native element would long have filled the places the foreigners usurped I entertain not a doubt. The competency of the American stock to do this it would be absurd to question, in the face of such a record as that for 1790 to 1830. During the period from 1830 to 1860 the material conditions of existence in this country were continually becoming more and more favorable to the increase of population from domestic sources. The old man-slaughtering medicine was being driven out of civilized communities; houses were becoming larger; the food and clothing of the people were becoming ampler and better. Nor was the cause which, about 1840 or 1850, began to retard the growth of population here to be found in the climate which Mr. Clibborne stigmatizes so severely. The climate of the United States has been benign enough to enable us to take the English short-horn and greatly to improve it, as the re-exportation of that animal to England at monstrous prices abundantly proves; to take the English race-horse and to improve him to a degree of which the startling victories of Parole, Iroquois, and Foxhall afford but a suggestion; to take the English man and to improve him, too, adding agility to his strength, making his eye keener and his hand steadier, so that in rowing, in riding, in shooting, and in boxing, the American of pure English stock is to-day the better animal. No! Whatever were the causes which checked the growth of the native population, they were neither physiological nor climatic. They were mainly social and economic; and chief among them was the access of vast hordes of foreign immigrants, bringing with them a standard of living at which our own people revolted.

Contract Let for \$350,000 Bank and Office Building.

Orlando, Fla., November 1—[Special.]—The State Bank of Orlando & Trust Co., L. L. Payne, chairman of the building committee, has awarded general contract to A. Bentley & Sons Co. of Jacksonville for the erection of its new building to cost \$350,000.

This structure will be 60 by 90 feet, 10 stories, with a steel or reinforced concrete frame, concrete floors and built-up roof. It will be equipped with 2 passenger elevators, vaults, safes, mail chutes, etc. and erected according to plans and specifications of W. L. Stoddart of New York. Contract for the mechanical equipment has not been awarded.

Begin Construction Soon on \$1,500,000 Power Plant.

Williamsport, Md., November 2—The Williamsport Power Co. of Hagerstown, recently incorporated with a capital stock of \$250,000, is expected to begin construction at once of its proposed power plant at Williamsport to cost \$1,500,000.

The plant will be operated by steam power and its initial capacity will be 18,000 kilowatts, which will probably be increased later to 40,000 or 50,000 kilowatts.

Improved Business Conditions Bring Optimism to Fayetteville.

[Special Correspondence Manufacturers Record.]

Fayetteville, N. C., November 3.

There is an air of optimism in this city resulting from improving business conditions, comparatively good crops and bright outlook for the future in practically all lines.

A survey will be made this month for placing a third lock in the Cape Fear river, about 8 or 10 miles below this place, to give a water depth here of 8 feet. This will permit operation of larger boats than is now possible, and will greatly stimulate trade. There has been a marked improvement in business recently due largely to the building of the splendid system of roads in the section, making it possible for the farmers to get to and from town quickly, and the development of the water transportation facilities will further extend the trade territory. The formation of the new boat line at Wilmington will make it possible now to get through bills of lading on shipments to New York.

Fort Bragg has been made a permanent army post and already from 1200 to 1300 men are stationed there, and this will materially help conditions in the city. Permanent buildings will be added as soon as appropriations are available.

The cotton crop this year was very good considering boll weevil conditions and in five weeks upwards of 15,000 bales were ginned in the vicinity. Prices are good and farm people are not only paying their current obligations but taking care of debts contracted during the depression period.

The construction of the new high tension line of the Carolina Light and Power Co. from Laurinburg will further accelerate the industrial development locally by insuring an adequate supply of hydro-electric power.

A gasoline trolley line is being operated between the city and Fort Bragg, a distance of nine miles by the Cape Fear Railways. Plans for extending the lines three miles to serve the cotton mill section are now being discussed. The Aberdeen & Rockfish Railroad is successfully operating a gasoline railway between Aberdeen and this city, a distance of 45 miles.

The Huske Building Corporation is completing a five story office building, steel and brick construction, 73 by 80 feet, containing 82 offices on the upper floors and four business places on the ground floor. It is heated by steam, with Otis elevator for passengers, and represents an investment of more than \$100,000. A 20 by 50 one-story brick structure has been erected in the rear to house the heating plant which consists of a 100 horse power Pennsylvania Boiler Co. boiler. The building is finished in hydraulic pressed rough texture white brick with terra cotta trimmings. Siles S. Dixon, is the architect, T. T. Thain, superintendent of construction.

A survey has just been completed for water and sewer extensions estimated to cost \$300,000. A new high school is being completed by the Brown, Harry Co., Gastonia, and the same company is making additions and improvements to three other city schools.

The National Bank of Fayetteville has had tentative plans made for construction of a 10-story bank and office building.

O. J. McConnell and R. M. Van Story and associates are building a large cotton warehouse.

Lumber firms here report unusually good business with prospects bright. The consensus of opinion is that prices are now on a conservative and safe basis, and that big reductions in the price of lumber cannot rightly be expected, due chiefly to the steadily decreasing supply and the difficulty of getting to the timber now standing. Labor charges and operation costs have been reduced to a minimum. Many men

are now engaged in lumbering operations and working 10 hours a day for \$1.50.

C. C. McAlister, president and treasurer of the Southern Timber & Lumber Co., states that the sale of dressed lumber and mill stock indicates that a big volume of work is under way on both houses and factories. "North Carolina," he stated, "has been one of the most prosperous of states this year, and the demand for lumber has been quite regular, with future prospects good."

Jackson Bros. Co., one of the largest lumber concerns in the section, is working at capacity in the production of 3,000,000 feet of lumber and box shooks monthly. This is being distributed in Pennsylvania, New Jersey and New York, and the firm looks for continued good business, according to Newton Jackson, treasurer. The West Lumber & Box Co., employing 250 men, is finding a ready market for all its products, with good prices prevailing.

The Highland Lumber Co. reports sales 30 to 60 days ahead of production with better than average prices. It is operating 11 ground mills, and reports that North Carolina has become a consuming state in larger measure where formerly it was mainly a producing state. Normally sales of this company are 50 per cent within the state. This year they jumped to 80 per cent. The difficulty of getting sufficient cars has hampered this company and many others in making prompt shipments.

The Citizens Lumber Co., controlled in Biltmore, N. C.; Walter P. Taylor, president and general manager, is operating at capacity in all departments.

The Currie Lumber Co., which is operating five portable mills, looks for a good year in 1923. The demand has been very heavy during the past four or five months, and recently an order was placed for green lumber of a certain grade at \$10 per thousand above what was offered for the same grade dry stock 90 days ago.

The wholesale grocery houses report good business, with collections steadily improving.

Corpus Christi to Become Deep Water Port.

[Telegram to Manufacturers Record.]

Corpus Christi, Tex., November 6.

The carrying of the \$1,000,000 bond issue, which went through at last Tuesday's election by the overwhelming ratio of 10 to 1, insures compliance with the conditions imposed by the United States Government for the appropriation of \$1,394,800 to dig a channel 25 feet deep and 200 feet wide from deep water at Port Aransas to Corpus Christi, a distance of 21 miles and its maintenance by the Government. The legislature of the State of Texas has appropriated approximately \$2,000,000 for the protection of the proposed harbor by the construction of seawalls and breakwaters.

The proceeds of the \$1,000,000 bond issue will be used to construct publicly owned and operated wharfage and terminal facilities. As soon as plans for the protection of the wharfage and terminal facilities are approved by the chief of engineers, he will ask Congress for the necessary allotment of Federal funds to dig the channel. Plans will be prepared and submitted in the near future, and we are hopeful to obtain Federal funds at the next session of Congress.

The new port will serve a large portion of Texas, being located in closer proximity to two-thirds of the state than any existing port; also all of northern Mexico and portions of adjacent states.

ROY MILLER.

Marked Activity at Elizabeth City, N. C.

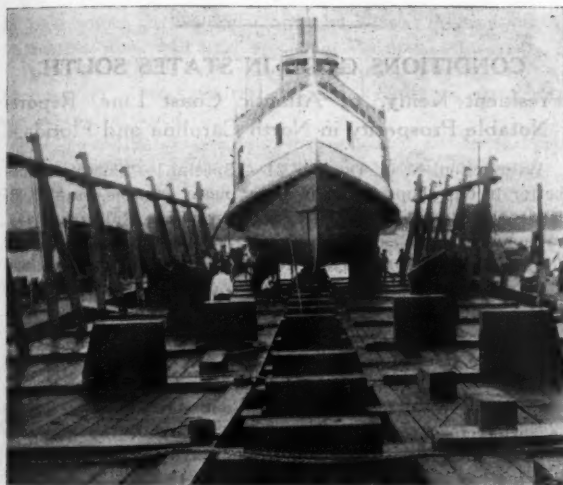
OPTIMISM MANIFEST IN ALL LINES OF TRADE AND INDUSTRY.

[Special Correspondence Manufacturers Record.]

Elizabeth City, N. C., October 26.

This city of some 12,000 persons, with a variety of industries and with about 40 jobbers in hardware, seeds, fertilizer, candy, groceries, etc., operating here is looking forward to great prosperity. Already it is throbbing with activity, and on every side one is greeted with smiles. Buying in all lines is heavy, salesmen say and the jobbers make a similar report, showing that purchases are for immediate needs and not simply for stock. The hosiery mills, the lumber manufacturing plants, the cotton seed oil establishment, the fertilizer plants, a candy factory, the ship repair plants together with the other industries here are all active in their respective lines. The various products are being sold over a wide area with demand reported from sections that heretofore have not purchased in Elizabeth City.

A modern candy factory with full equipment has been established here by W. H. Weatherly & Co. who have just occupied a recently completed fireproof building, 80 by 100 feet, three stories high. It is of reinforced concrete and steel construction with steel sash throughout. The ceilings are 16, 14 and 12 feet high on the first, second and third floors,

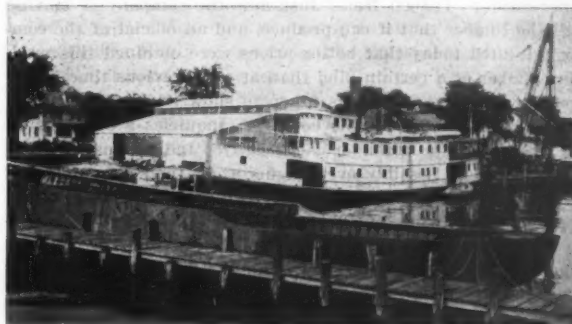


LAUNCHING A VESSEL FROM THE YARDS OF THE ELIZABETH CITY IRON WORKS & SUPPLY CO.

respectively. The two lower floors are used in connection with the wholesale grocery business operated by the Weatherly company. The third floor is devoted entirely to candy manufacturing. It is well lighted and has a complete ventilating plant. All new types of machines for producing candy have been installed, and it is planned to double the capacity at an early date. A wide distribution is already assured, the management states and orders are coming in rapidly. The building is equipped with an Otis elevator of two tons capacity.

The Elizabeth City Iron Works & Supply Co. has just completed and has now in operation a ship repair plant with facilities for handling all kinds of work on boats traversing the adjacent waters. A marine railway for accommodating vessels up to 200 feet long is a feature. The main building is the machine shop, 100 by 100 feet with a ceiling height of 12 feet. It is of reinforced concrete and steel construction, fireproof and well lighted by steel sash. It has facilities for handling and milling lumber as well. Andrew Sanders is

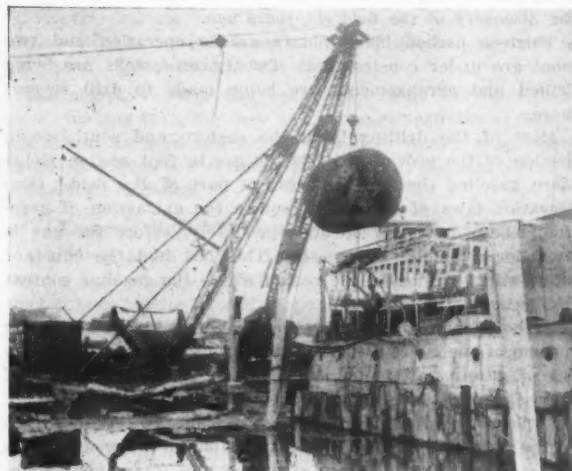
vice president and railway superintendent. Grad Sanders is president and general manager and H. W. Sanders is secretary and treasurer. Additional improvements are contemplated for the near future. Just now the yard is busy rebuilding tugs and boats with much more work in sight. A derrick with a lifting capacity of 50 tons makes it possible to handle the heaviest type of work. The plant has a front-



PLANT OF ELIZABETH CITY IRON WORKS IN BACKGROUND. age of 700 feet on deep water, and there is a dock along the entire strip.

Sealed proposals will be received up to December 15 by W. Ben Godwin, Mayor, for \$300,000 improvement bonds. They are the first block offered for sale of an issue of \$550,000 for a combined water, electric light and power system, and \$230,000 for a sewerage system.

Lumber mills in this section are unusually active. Some are so busy with orders that they have found it necessary to eliminate answering inquiries for a time so fast have new



A 50-TON DERRICK IN ACTION.

orders come in during the past week. At least one mill has found the local demand for house building, repairing and similar work so large that they are now not shipping any lumber to outsiders but confining their efforts to taking care of customers within the city. Prices have stiffened considerably recently with the result that producers are optimistic and encouraged.

The Foreman-Blades Lumber Co. recently acquired addition-

al timber lands totaling 18,000 acres and cutting timber on this will soon be under way. Already the company has close to 500 persons actively engaged in operations, and with the necessary expansion in all lines that will come with the development and utilization of the timber from this tract more men will be given employment. Two boilers of 250 horse power each are now being placed, and the installation of a complete band mill—8 feet in diameter, together with the necessary carriage, edger, trimmer and steam feeder is planned for the near future. The expansion in this line will necessitate the erection of from two to three more dry kilns.

The output of the Foreman-Blades company is now about 100,000 feet daily and with the added equipment this will be increased to 140,000 feet. Just now the company is moving all the lumber that it can produce, and an official of the company stated today that better prices were obtained this week for lumber of a certain kind than at any previous time in the past two years, and this is taken to show the strong demand for lumber throughout the country. Inquiries are coming in at the rate of a dozen or more daily. Indications are that prices will go possibly even higher than their present level.

Kramer Bros. Co. in the same vicinity are unusually active producing millwork of various kinds.

A. B. Houtz, of the Southern Roller, Stave & Heading Co. reports that he is busier now than for many months and is working at capacity to make deliveries. With the resumption of work in the coal mines the demand for mine timbers and props has increased at a great rate and orders are coming in for quick delivery.

The Commander Lumber Mills here, T. A. Commander, manager, are busy supplying local demands for lumber, and manufacturing crates.

Great Activity in Monroe Gas Belt—Thirteen Carbon Black Plants in Operation—Prospective Pipe Line Construction.

Monroe, La., November 1—[Special.]—Greater activity is being shown in the Monroe gas belt than at any time since the discovery of the field six years ago.

Thirteen carbon black plants are in operation and two more are under construction. Twenty-three wells are being drilled and arrangements are being made to drill several more.

Most of the drilling is in the eastern and southeastern portion of the proven area, as the gas in that section yields more gasoline than in the western part of the field. Conservation laws of Louisiana require the extraction of gasoline, wherever it can be done profitably, before the gas is used for commercial purposes. This has had the effect of stimulating drilling in the region where the gasoline content in the gas is greatest.

Carbon black plants operating in the field, as shown by reports of the State Department of Conservation, get enough out of gasoline extracted from gas to pay the expenses of their factories, making the carbon black a clear profit.

Explorations for oil are under way in the territory east of the proven gas field. Several wells are being drilled in that section. One of them struck gas in commercial quantities which had the effect of enlarging the proven area of the gas district about ten square miles. The explorations for oil are extending as far east as West Carroll and Richland parishes.

Recent completion of the Government lock and dam in the Ouachita River at Monroe brought marked activity along other industrial lines. J. M. Goff of Memphis, Tenn., who represents an English syndicate which owns over 800,000,000 feet of timber in the Ouachita River valley in this section, has announced that steps are being taken to construct a large

saw mill, furniture factory and other industries at Monroe for the utilization of this timber and to manufacture it into finished products. These industries will employ more than 1000 men and will use natural gas for fuel. The timber will be rafted down the Ouachita River to the factories at Monroe.

Financial interests of Norwich, Conn., purchased site for a pulp and paper mill at Monroe, and will use the waste material from saw mills and wood-working plants in this district.

Negotiations are pending between three large interests looking toward a merger of their holdings in the Monroe gas field. These interests are the Union Power Company, which is controlled by J. S. Cullinan of Texas and the Frost-Johnson Lumber Company of Shreveport; H. C. Morris, trustee, of Dallas, Tex., and F. W. Walbridge of New York, who represent an Eastern syndicate, and the Texas Oil Company, which is a subsidiary of the Standard Oil Company.

These three interests own nearly one-half of the proven area of the gas field. Their object in effecting a merger is to build pipe lines and otherwise find markets for their gas. One of the pipe lines will probably run from the Monroe field to Port Arthur and Beaumont, Tex., with laterals to the Union Sulphur Mines at Sulphur, La., and to Lake Charles, La. Industrial plants along that line, it is stated, will consume more than 100,000 cubic feet of gas a day.

The Cullinan-Frost-Johnson interests have chartered the Texas, Arkansas and Louisiana Development Company under the laws of Delaware for the purpose of constructing the pipe line to southeast Texas.

CONDITIONS GOOD IN STATES SOUTH.

President Kenly, of Atlantic Coast Line, Reports Notable Prosperity in North Carolina and Florida.

Wilmington, N. C., October 31—[Special.]—"Conditions are better in our shops than for many, many months," said J. R. Kenly, president of the Atlantic Coast Line Railroad today. "When the strike occurred we had 5600 men working for us. Of this number 600 stayed, and we immediately determined a set time for those who wanted to come back as old employees, after which time they would be taken on as new men. Today we are working our shops 114 per cent manned, and I am sure that the efficiency is 150 per cent compared with what it was prior to July 1. The strike has been settled and we have an agreement with our new employees which is satisfactory to us and to them. Many of the new men are North Carolina farmer boys who have a natural aptitude for mechanics, and they make fine workmen. Few of our old men have come back, although if we can use them we are taking them but not displacing any employees.

"There is a shortage of equipment throughout the country, not through any fault of the railroads but due to an inability during the last 10 years to make a proper profit. We have ordered 2700 cars and 45 locomotives, and our equipment is in better shape today than for many months.

"Generally I believe conditions are much better than they have been for months. In the South the cotton crop will be near 11,000,000 bales, I believe, and the corn crop will be very large. Lumber operations are being speeded up and more and more cars are needed for this business.

"North Carolina and Florida are enjoying possibly the greatest degree of prosperity of any states in the country.

"The South is the greatest section of the country and it is now being rapidly developed. More and more men are coming from other sections of the country and settling here. Our climate is unsurpassed, two and three crops can be raised yearly contrasted with the three to four months of imposed idleness in the Western states as a result of weather conditions, and we have good negro labor to offer."

Wilmington and Other North Carolina Cities Making Great Improvements to Water and Sewer Plants.

[Special Correspondence Manufacturers Record.]

Wilmington, N. C., November 1.

Work to the value of more than \$2,000,000 has been handled during 1922 by the Carolina Engineering Co., of this city, according to G. H. Bishop, consulting engineer. The company now has 23 engineers engaged and reports from the district engineers on prospects for continued activity along these lines in 1923 are very encouraging. Already a number of new engineering jobs are under way, the contracts for which will be awarded early next year. An architectural department was added recently to the organization and in three months it handled 20 different layouts.

Among contracts now under way in which the company is interested are the following:

Extensions are being made to the sewer and water plants at Lumberton, and a new purification plant and additional street paving are a part of an improvement program necessitating the expenditure of \$400,000. The Southern Paving Construction Co., Spartanburg, S. C., has the paving contract.

Plans and specifications are being prepared for sewer improvements at Clover, S. C., to cost about \$60,000, the contract for which will be let about January 1.

The company is preparing specifications and plans for a \$175,000 water purification plant and similar improvements at Monroe. Bids will be asked about the first of the year.

At Forest City a new water purification plant has just been started to cost \$50,000. Gulon & Withers, Gastonia, are the contractors.

At Gibsonville \$75,000 is being expended in sewer and water extensions. Tucker & Laxton, Charlotte, are the contractors.

Bids will be advertised soon to be opened November 23 on a \$200,000 paving project in Wilmington. These will principally be of brick and asphalt. A program involving a similar amount was completed in the spring.

Work on a \$100,000 improvement program at Kernersville has just been started with Boyd, Higgins & Goforth, Charlotte, as the contractors.

Sewer and water plants for Taylorsville are being installed at a cost of \$75,000. The Electrical Construction Co., Charlotte, has the general contract.

About \$250,000 is being expended in improving and modernizing the water system at Wilmington. Tucker & Laxton, Charlotte, are the general contractors. E. L. Scruggs is the resident engineer for the contractors, and he reports the work about 25 per cent complete. It consists of laying 636 feet of bell and swivel joint pipe, 24 inches in diameter under Toomer's Creek at a depth of 35 feet in a trench 8 feet wide. The cradle used in laying the under water pipe line at Norfolk in connection with its \$4,000,000 program is being used here. A line 11,000 feet long is being built on creosoted wood pile bents across swamp lands. The bents are 12 feet on centers. A submerged pumping station is also being built, to operate by control from switches placed in the filter plant. A 2300-volt line runs parallel to the pipe line and it will be used for power from filter station to the new pumping station. All the filters are to be overhauled, new manifolds added, laterals, sand and gravel replaced.

In addition Tucker & Laxton, have a large amount of other work of this same character in this section.

At Fremont a complete sewer and water system costing \$100,000, suitable for a city of 3000 persons is being built. Gilbert C. White, Durham, is the engineer.

At Enfield similar work is being done at a cost of \$150,000

with W. C. Olson, Raleigh, engineer. The Woods-Rucker Construction Co., Atlanta, have just completed a steam power plant.

The Clark-Lynch Lumber Co. reports October the best month since 1920, with prices firm and advancing slightly. More houses are under construction, it is said, than ever before in the history of the section; and as a result the local demand for building materials is great. Many big factories including fertilizer plants are making extensive improvements and additions resulting in heavy purchases of lumber. The wholesale demand is also good.

The Cape Fear River Lines, W. C. Manson, general manager, running between New York, Wilmington and other points has been started. This will permit shipping to and from New York on through bills of lading.

The Diamond Steamboat & Wrecking Co. has recently added extensively to its equipment, and is operating a barge service between this city and waterfront towns, carrying a variety of materials and particularly fertilizers.

F. B. Gault, of the North Carolina Lumber Co. reports business good and on a conservative basis, with sales equaling production.

The American Cotton Oil Co. plant is working at capacity with 150 men engaged. There is a ready market reported with good prices for practically all of the company's products.

R. L. Lacey, operating as the Alabama Concrete Products Co., with main offices at Selma, Ala., reports work under way in Alabama and North Carolina on projects for which he has the contract aggregating \$1,000,000. About 500 men are now employed, and this organization has been kept busy throughout the year. Mr. Lacey anticipates a good building year in 1923, and is getting his organization in readiness to handle a big volume of contracts.

Modern concrete handling equipment is used on all the work, with the result that an average of 530 feet of concrete pavement, 18 feet wide is laid daily.

The company owns and operates a large concrete brick plant, making both the face and common varieties at Selma and about 40 men are engaged in this work. Sales have exceeded production throughout the year, and the demand is far from satisfied.

Erecting \$200,000 Plant from Steel Ship Parts.

A building 52 by 240 feet fabricated entirely of parts taken from a steel ship is a feature of the big new plant being erected here by the Broadfoot Iron Works, W. G. Broadfoot, president, and which when completed will involve an investment of close to \$200,000. Now 70 men are engaged. When the improvements are finished 200 will be on the payroll. The work consists of general repairs to boilers, locomotives, ships, and general machine and welding jobs. The plant will be one of the most complete and modern of its kind in this section.

The main building will be 52 by 240 feet, and most of it is two stories high. It is built on a reinforced concrete foundation, part of which rests upon wood piles. The main floor ceiling height is 22 feet. The main supporting members are 12-inch heavy H-columns, originally intended for ship construction. The roof is arch-shaped, being formed by riveting together rib-members. The building is prevented from spreading by two one-inch wrought iron bars with turn-buckles, connecting opposite supporting members. The ceiling rafters are 2x12 Georgia pine running lengthwise with

the building and placed about 2 feet on centers; 1-inch sheathing is used covered with composition roofing. The supporting members are spaced 13 feet on centers.

The company purchased all the steel as scrap from a local shipyard. It also purchased 40 houses from the Government and is using the sash and sized materials in the new building. The remainder of the lumber has been sold. A 10-ton electric traveling crane will be installed to handle the materials and equipment, operated on a 200-volt, 3-phase, 60-cycle current. Practically all of the equipment will be individual drive. The principal items include: 10 lathes ranging from 84-inch swing to 16 inch; 2 boring mills; slotter; planer; three drill presses; three shapers; two milling machines; Heald cylinder grinder, and electric welder.

The main floor is from 8 to 12 inches thick, of reinforced concrete, divided into 12 separate blocks to prevent cracking and allow for expansion, and to permit laying of conduits and pipes conveniently in the spaces between the blocks.

A blacksmith shop of galvanized iron construction has been completed and the following equipment installed: Steam hammer and small forges. A complete foundry is provided for brass and gray iron work. A locomotive repair shop with accommodations for 4 locomotives is provided. It is 60 by 150 feet and 30 feet high.

A complete acetylene generating plant has been installed. In the boiler shop 2 rotary shears, 2 sets of rolls and a complete flue cleaning shop have been installed.

The railroad tracks entering the yard are being rearranged, and every effort is made to get the plant completed at the earliest possible time. A large part of the reinforced concrete work has been finished. Steel has been erected and the roof placed over the first section.

Modern Water Supply System Under Construction at Memphis—To Provide for City's Needs to 1950.

Memphis, Tenn., November 1—[Special.]—Contracts amounting to \$1,471,000 were let recently for the underground piping, reservoir, pumping station, iron removing plant and other features of the new water system for Memphis; and the work is now in progress. About a year will be required for completion.

Contracts for about \$500,000 were placed early in the summer for the necessary machinery for the pumping station.

The plant, when completed, will have a nominal daily capacity of about 18,000,000 gallons, and will be capable of supplying 25,000,000 gallons daily for short periods.

Twenty-five new wells are to be constructed, four to be located on Dunlap Street along the North Parkway, four west, and seventeen east of Ayers Street. These are to be about five hundred feet apart. This location is regarded as the most suitable one that could be selected.

The main pumping station is to be on Dunlap Street, situated on a plot of ground 840 feet along Dunlap and 655 feet east along North Parkway to Ayers.

The pumping station will be an attractive brick building with a flat concrete roof on which will be constructed tennis courts that will serve as a public playground. It will be 120 feet by 220 feet and have all modern equipment. Surrounding it ample space is provided for additional units, should they be needed some ten years hence, as well as space for offices, lockers, laboratory, etc.

A reservoir will be constructed in this same location; dimensions to be 325½ feet by 289½ feet and being 14 feet deep. It will hold 10,000,000 gallons reserve supply of water.

A separate plant will be constructed in which the iron will be removed from the water, reducing it to a softer quality. An aerator in the shape of a Maltese cross will serve as a plant for further purification. It now appears that air lifts will be used for raising the water and delivering it through

the collecting conduit for the treatment plant at Dunlap Street. Air will be furnished by four compressors: two for regular service, and two for reserve, each having a capacity of 2700 cubic feet of air per minute.

Secondary pumps of the centrifugal type to be operated by water motors will be installed for lifting the well water about 20 feet to the aerating and filtration works. In the event of a severe conflagration it is possible to by-pass the filtration works by shutting down these pumps; though it is claimed that this would not be necessary with any fire such as Memphis has yet experienced.

Three supply mains are provided, having a combined capacity of about 60,000,000 gallons daily, for connecting the Dunlap Street station with the present distribution system and arranged for meeting the fire flow demand on the high value business district.

The wells are to be sunk by the Water Department of the city.

Some of the pipes are now being laid and others will be laid as street improvements now underway are made.

The total cost of the new plant, according to present estimates, will amount to \$2,317,000. This sum does not include \$290,000 needed for pipe line extensions.

The operating costs on the plant, it is estimated, will be \$126,800 a year. In addition to this there will be 5½ per cent interest on the bonds and a 2½ per cent sinking fund, the two totaling \$185,300; and bringing the total annual cost of operation and fixed charges up to \$311,900.

With the completion of this work and the sinking of all the new wells, most of the old wells from which the city at present draws its water supply, will be abandoned, also the present main pumping plant on Auction Avenue.

The new plant is designed to provide for the city's water supply until 1950. With the facilities which it will afford for fighting fire, Memphis property owners will be relieved from paying what is said to be needlessly high insurance rates because of present deficiencies due partly to the absence of a storage reservoir and partly to the need for reinforcement of the distributing system.

Preliminary Work Under Way on \$3,000,000 Power Plant—Capacity 30,000 Horsepower.

Muskogee, Okla., November 2.—The Oklahoma General Power Co. is making satisfactory progress on the construction of its large electrical power plant on the Arkansas River, excavation practically being completed.

The initial cost of the generative plant is estimated to exceed \$3,000,000 and its capacity will be 30,000 horsepower, the plant to generate 22,500 kilowatts. High lines for transmission of the current are being strung from Fort Smith to Oklahoma City; it is stated that electric wires will span nearly 400 miles of country.

It is planned to begin the construction of the plant proper within a month and have it in operation by August of next year. Construction will be under the supervision of George F. Phythian, construction superintendent of the company.

Expending \$2,000,000 for Transmission Lines.

Charlotte, N. C., November 1.—The Southern Power Co. is pushing the construction of 200 miles of additional high tension transmission lines, the completion of which will mean a total of 2400 miles. These lines will serve a number of important cities and involve an expenditure of \$2,000,000.

The company anticipates the completion next year of two new hydro-electric plants and two steam plant additions, which will have a total generating capacity of 200,000 horse power, and it is to handle this increased power that the transmission lines are being constructed.

COTTON TESTING WORK AT CLEMSON COLLEGE.

A Service Valuable to the Entire South and Nation.

By A. B. BRYAN.

One of the most important lines of work conducted by the U. S. Department of Agriculture in the interest of the cotton grower is the cotton testing work carried on at Clemson College, S. C., in co-operation with the Textile Department of that institution, the object of the work being in general to aid the grower to produce the kind of cotton that will have greatest commercial value because of its spinning, bleaching, and other qualities.

The cotton testing work is under the general supervision of William R. Meadows, cotton technologist, and is under the direct supervision of William G. Blair, specialist in cotton testing, assisted by H. B. Richardson, C. E. Folk, and E. S. Cummings, assistants in cotton testing. Mr. Meadows and Mr. Blair were formerly professors of carding and spinning at the Clemson Agricultural College, and Mr. Folk is a graduate of this college. Mr. Cummings is a graduate of the Lowell Textile School, and Mr. Richardson received his training in mechanical engineering at the Massachusetts Institute of Technology. All of these men have had practical mill experience.

The work was commenced July 1, 1913, by the Bureau of Plant Industry, U. S. D. A.

In 1916 it was transferred to the Bureau of Markets and placed under the direction of a Supervisory Committee. At the present time this project is a part of the Cotton Marketing Division of the Bureau of Agricultural Economics.

The cotton testing work is conducted for the purpose of determining the spinning and bleaching qualities of the different grades, varieties and growths of cotton; to determine in co-operation with the Bureau of Plant Industry, the best variety of cotton to grow in certain localities; and to study the effect of varying conditions of ginning, baling, compressing and handling of cotton.

The Clemson Agricultural College was chosen for this work for a number of reasons. It is located close to one of the thriving mill sections of the South, being about 35 miles from Greenville and 20 miles from Anderson, S. C.; is equipped with modern mill machinery to handle both carded and combed work; and has been spending certain sums of money for the past several years in obtaining machinery and instruments for the purpose of developing a complete cotton testing laboratory. Dr. W. M. Riggs, president of the college, and Prof. C. S. Doggett, director of the Textile Department, are giving the Government their hearty co-operation and support in facilitating the completion of the different tests.

The results of the spinning tests are demonstrated to the trade through samples on file in the Cotton Testing Laboratory at Washington; through articles in the different textile magazines, the latest article being "Spinning Tests of Certain Low Grade Cottons that Have Been Reginned or Recleaned"; through manuscripts issued by the Federal Department of Agriculture; and through the following Department Bulletins:

Spinning Tests of Upland Staple Cotton, Departmental Bulletin No. 121.
Manufacturing Tests of the Official Cotton Standards for Grade, Professional Paper, Departmental Bulletin No. 591.
Comparative Spinning Tests of the Different Grades of Arizona Egyptian with Sea Island and Sakellarides Egyptian Cotton. Professional Paper, Departmental Bulletin No. 359.
Manufacturing Tests of Cotton Fumigated with Hydrocyanic Acid. Professional Paper, Departmental Bulletin No. 882.
Comparative Spinning Tests of Meade and Sea Island Cottons. Professional Paper, Departmental Bulletin No. 846.
Preliminary Manufacturing Tests of the Official Cotton Standards of the United States for Color and Upland Tinged and Stained Cotton. Professional Paper, Departmental Bulletin No. 990.

Any of the above bulletins may be obtained, says Mr. Blair, for a nominal sum, (usually 5 or 10 cents) from the Superintendent of Documents, Government Printing Office, Washington, D. C.

Good Prices for Cotton and Tobacco Help to Make Wilson District Prosperous.

Wilson, N. C., November 6—[Special.]—A big building program is under way in and about this city and it is being further advanced as a result of the good prices obtained for the tobacco and cotton crops this year, both of which are exceptional. The MANUFACTURERS RECORD correspondent was shown the bank book of a negro farmer who already had sold tobacco and cotton to the extent of \$4000, and he hadn't half finished the ginning of his cotton. And the place was not a large one. Under boll weevil conditions another farmer raised 13 bales of cotton on 11 acres and said he was going to sell one bale to pay his fertilizer bill, his only obligation, and would store the rest until prices got higher.

Merchants in every line report business on a large scale with payments for purchases now practically on a cash basis, and a real and successful effort being made by the farming class to reduce past indebtedness. Bankers tell of steady improvement among individuals and firms in varied lines in meeting their obligations.

The sale of tobacco is in full swing and upward of \$1,250,000 is being passed on in cash to the farmers every week for this product alone. The gins and cotton seed oil plants are flooded with business and some are running day and night.

The Cherry Hotel was completed this year and placed in use, representing an investment of about \$650,000 and having 200 rooms. The hotels are crowded and report that good business exists throughout the year.

More than \$500,000 was spent last year for school improvements in this section. A \$250,000 high school building is being completed. W. P. Rose of Goldsboro, is the contractor. It is a three story structure of fireproof construction.

Every township in this county has a public school and the majority have high schools. Each child is given an opportunity to complete without cost the grammar and high school courses; to assist them in getting to and from school the county owns and operates without charge to the students a total of 64 specially equipped motor busses. The completion of a splendid system of good roads has made possible the full use of this method of transport.

The county is erecting a garage 50 by 300 feet for storing the cars used in carrying the children. Complete equipment will be installed for overhauling and rebuilding the trucks, and a force of trained mechanics will be employed.

Each school has sufficient room provided for housing the teachers. The principal is in charge of the dormitories and a cook is employed; the teachers are boarded at the schools.

New streets are being paved, water and sewer lines extended, and sidewalks laid, so that the town improvements keep pace with the building operations. Many houses are rising in and about the town, and activity of this character is spreading to the agricultural sections.

A considerable number of business houses of reinforced concrete and of brick are under construction in Wilson and there is scarcely a block in the business section where some such development is not observed.

F. N. Bridges, of the Farmers Cotton Oil Co. reports collections this year as better even than in normal times. The firm is sold up on meal and hulls for nearly two months, and the September sales throughout the country indicate practically no carry-over of old oil into this section thus assuring a healthy market, Mr. Bridges states. The company also controls a plant at Lillington, which is operating at capacity.

The cotton and knitting mills in the Wilson district are working at capacity.

The sale of real estate has been wonderfully stimulated in recent weeks, and farm lands are being sold now that could not be marketed some months ago at any reasonable price.

THE IRON AND STEEL SITUATION

Conditions in Pittsburgh District.

Pittsburgh, Pa., November 4.—[Special].—The steel industry continues to operate at a trifle above 70 per cent of capacity, which means a tonnage output 20 per cent above the rate in 1912 and 1913, the two best years before the war. Exports of iron and steel products generally were 140,455 tons in September, while they averaged 225,000 to 250,000 tons a month in 1912 and 1913. Thus if consumption is equal to current production it is much above that of the two best pre-war years. Population has increased only about 10 per cent meanwhile.

Supplies of open top cars continue, on the whole, equal to moving the current production of steel requiring such cars, while some of the stocks accumulated in September have been moved. A fresh box car shortage, however, is developing on account of the order that box cars move west to take care of grain movement.

The finished steel market is very dull as a whole and in no line are there purchases equal to the current production and shipments. The quietness of the market does not indicate a decrease in consumption, being rather a reflection of the heavier deliveries mills have been making of late on old orders, reinforced by the opportunity now afforded consumers to draw upon such stocks as they may have accumulated earlier in the year in anticipation of results of the coal strike and railroad congestion. These influences gave deliveries only a slight backset. Steel ingot production was about 900,000 tons less in the third quarter than it would have been if the June rate, the highest of the year, had been maintained, this apparent deficit being equal to seven or eight days of production at the present rate. Steel accumulated on account of car shortage recently hardly reached a maximum of as much as three days of production.

Delivery premiums on bars, shapes and plates have disappeared entirely, as to any important orders, leaving the market on the flat basis of 2.00c for any delivery. Concessions are presumably being made from this price on steel for large freight car orders.

In sheets the 3.75c price has disappeared and purchases at 3.60c are uncommon, the bulk of the business being done at 3.50c and 3.35c, according to delivery, etc. There is more buying of sheets, relative to production, than in other finished steel lines, but the buying is well below the production.

The American Sheet & Tin Plate Company (Steel Corporation) is expected next week to open order books for shipment after January 1. There is less likelihood than a few weeks ago of its advancing above its former prices of \$4.75 for tin plate and 3.35c for sheets, but it remains quite possible that advances will be made.

There is heavy pressure upon pipe mills for deliveries of butt weld sizes of black and galvanized merchant pipe, attributable to the boom in garage and dwelling house construction. Demand for oil country goods has been light in the past four months on account of the statistical position of oil.

Connellsville furnace coke has held steady at \$7.50 to \$8 in the past fortnight, after its sharp drop from \$12. There is little buying demand but the market seems to be supported by a number of buyers having concluded to contract to the end of the year on the recent drop.

Pig iron continues stagnant. Inquiries are for small lots, not provocative of energetic competition, Bessemer remains at \$33, valley, and foundry at \$30, valley, with small lot sales right along at these prices. On a small lot basic declined \$1, selling at \$29, valley. Furnaces in blast have moderate order books to the end of the year, while idle furnaces are showing little disposition to get into blast.

While the Steel Corporation's earnings increased a shade

from the second to the third quarter, the September earnings were poor. The drop was due largely to the heavy wage advances. With better operations and slightly higher realized prices, as old orders are worked off, the current quarter may show earnings in the neighborhood of \$25,000,000, against a trifle over \$27,000,000 in each of the two preceding quarters, and earnings of only \$7,000,000 in the month of September.

Quotations Hold Up Well in Birmingham District—Production Heavy.

Birmingham, Ala., November 6.—[Special].—No consternation is noted in the pig iron market in the Birmingham district, despite announcement by a one-furnace interest quoting prices \$2 under the average figure on No. 2 foundry iron, and persistent efforts in other circles to bring about recession in iron quotations. Probable make for the balance of the year, (and the production is heavy now) has been well covered. Car supply is somewhat improved and during this month there will be a reduction of surplus iron from the yards. But little inclination is manifested so far to sell into the coming year with any tonnage worth while; inquiries are numerous for future needs and the claim is further made that supply and demand will regulate towards a firm basis.

The Central Iron & Coal Company, (Iron Products Corporation), with a furnace at Holt, in Tuscaloosa county, announced recently No. 2 foundry, 1.75 to 2.25 per cent silicon, at \$25. Average quotations at that time ranged from \$27.50 to \$28.50 per ton. Other interests declined business, the lowest price heard after the \$25 per ton announcement being \$27. Confidence is expressed by the furnace interests and belief is strong that there will be a buying movement starting shortly that will cover a considerable portion of the tonnage for the first quarter of the coming year. The Woodward Iron Company, with three blast furnaces at Woodward and two at Vanderbilt, has all five making iron, for the first time in years. Four are on foundry and one on basic iron. The Sloss-Sheffield Steel & Iron Company, the Alabama Company and the Tennessee Coal, Iron & Railroad Company are repairing a furnace each and expectations are that there will be warrant for operation.

Production in Alabama for the present month promises to be the heaviest in three years and longer, equal to the wartime period. Local consumption is slowing down but little, despite the fact that the season of the cast iron pipe trade is almost at an end. A few lettings are still coming in for pressure pipe and sanitary pipe makers are assured that on the turn of the year there will be necessity for a large quantity of their goods. Some operations in the latter line will be necessary all through the winter. The pressure pipe interests have sounded out a claim of too-high prices for pig iron, while reply has been that costs of production and supply and demand have regulated the iron market.

The foundations for the addition to the plant of the Birmingham Stove and Range Company are well in hand and the structural work will soon be under way. Gas ranges are to be produced. This plant shipped out a greater quantity of stoves during October than in any previous month in its history. Upwards of 225 tons of pig iron are melted monthly in this plant. More than 50 per cent of the stoves shipped last month went into the Birmingham territory.

J. R. McWane, of the McWane Cast Iron Pipe Company, manufacturing small sized cast iron pipe and joints, reports progress on the first unit of the big new plant and expects to have it in operation early in March. This company recently took on a contract from Detroit, following one at Philadelphia.

Both car building and repairing plants in the Birmingham

district, Chickasaw Shipbuilding & Car Company and the Virginia Bridge and Iron Company are well supplied with orders and are warranted full production. The Tennessee Coal, Iron & Railroad Company, looking forward to greater activities the coming year, is building up its railroad equipment and will get 195 cars of various kinds from the Chickasaw Company, subsidiary organization.

Phoenix Portland Cement Company now erecting a plant to cost \$2,500,000 at North Birmingham, has let contracts for steel buildings to the Virginia Bridge & Iron Company.

Coal production in Alabama is showing slight improvement as car supply grows better. Domestic coal is in dire need. Additional business is wanted for steam and bunker coal, but with car supply short there is constant complaint. Coke production is none too great. Output at ovens has been disturbed some by reason of the car supply shortage, bee-hive ovens not being pulled regularly because of poor car supply. Coke prices have not weakened any in this territory, the foundry product holding at from \$8.50 to \$10 per ton. Box cars are being used in the shipment of coke outside of the district and quite a little tonnage is moving into the southwest. Movement of coke to New England is still being given attention.

Recession in scrap iron and steel prices is noted but dealers are not panicky. Heavy melting steel is still around \$14-\$15. Some buying is on and contracts which will run for some time yet call for a large tonnage to be delivered. Stocks in hand with dealers are large while the opposite is noted with consumer. Larger centers have been inquiring for scrap in this section but strong restrictions in grading makes the business unacceptable.

Quotations for pig iron and iron and steel scrap follow:

PIG IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$25.00 to \$28.50; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$25.50 to \$29.00; iron of 2.75 to 3.25 per cent silicon, \$26.00 to \$29.50; iron of 3.25 per cent silicon, to 3.75 per cent silicon, \$26.50 to \$30.00; iron of 3.75 to 4.25 per cent silicon, \$27.00 to \$30.50; charcoal iron, f. o. b. furnaces, \$33.00 to \$34.00.

OLD MATERIAL.

Old steel axles.....	\$20.00	to	\$22.00
Old iron axles.....	20.00	to	22.00
Old steel rails.....	17.00	to	18.00
Heavy melting steel.....	14.00	to	15.00
No. 1 R. R. wrought.....	17.00	to	18.00
No. 1 cast.....	19.00	to	20.00
Stove plate.....	16.50	to	17.50
Old car wheels.....	18.00	to	20.00
Old tramcar wheels.....	18.00	to	21.00
Machine shop turnings.....	10.00	to	11.00
Cast iron borings.....	10.00	to	12.00
Cast iron borings (Chem.).....	15.00	to	16.00

To Develop and Colonize 6000 Acres Florida Lands.

Miami, Fla., November 1—[Special.]—Plans of the Everglade Land & Development Co., to which reference was made in the MANUFACTURERS RECORD recently in connection with the International Sugar Co., involve the development and colonization of 6000 acres. The entire property is a 10,000-acre tract west of Fort Lauderdale, with a 20-ft. canal around it, and the company intends to develop it through drainage, a system of roads, etc. It has made application for the creation of a drainage district.

The International Sugar Co. has purchased and secured options on 4000 acres, leaving 6000 acres which the Everglade Land & Development Co. plans to cut into small farms of 10 acres and up, with drained land and roads. These two companies are not connected, except that the sugar company plans to arrange with the purchase of the farms to buy their sugar cane for a number of years on a graduated scale, according to the price of sugar.

As bearing on its own activities, the Everglade Company states that it expects to be able to prove that one purchasing even 10 acres, by growing winter vegetables, fruits, chickens, and planting the surplus land to sugar cane, will be able to make a good living for a small family.

RAILROADS

\$2,500,000 FOR COAL LOADING FACILITIES.

Norfolk & Western Railway Fulfilling Extensive Program at Tidewater Terminal.

Norfolk, Va., November 4—[Special.]—Upwards of \$2,500,000 is being expended by the Norfolk & Western Railway Co. here in improving its coal handling facilities. Piers 2 and 3 are being electrified, the runways rearranged and improvements made to the storage and sorting yards. Power plant facilities are being improved, and six electric dump cars are to be added to those now in use. W. H. Johnson, Superintendent of Terminals, J. E. Crawford, chief engineer, at Roanoke, and L. L. Kelley, assistant engineer at Norfolk, are connected with the improvement program.

It is expected that the improvements will be completed by March 1, 1923, which will give the railway facilities for handling coal on every type of vessel in the most efficient manner, and at the rate of more than 1,250,000 tons monthly. Pier 4 has a record of handling 865,000 tons in one month working a 16 hour day, and recently maintained for three consecutive hours loading totaling 12,380 tons, and in one hour handled 5500 tons. It is 1200 feet long, while Pier 2 is 800 feet and Pier 3, 1000 feet. Pier 2 will be used exclusively for bunkering boats, loading barges, river schooners and similar vessels.

The Wellman-Seaver-Morgan Co., of Cleveland, has the contract to install a third car dumper. Two are now in use, and the new one will be built directly alongside, so that car dumping will be centralized, and the tracks so arranged that coal from any dumper may be handled over either of the three piers. All empty cars are delivered to the same yard by gravity. In fact, all cars are handled by gravity after they leave the classification tracks. They pass over an automatically operated scale, are weighed, and then pulled up the incline to the dumpers by a Barney electrically operated by 500 horse power motors. The cars that deliver the coal to the piers are of 60 and 100 tons capacity. They are operated by 50 and 100 horse power motors placed on each truck. Overhead trolleys supply 600 volts direct current. On the large pier 12 cars will be used. Four new ones have recently been received and six are to come. Pier 4 handles its cars by elevators equipped with electric motors of 1800 horse power each, and counterbalanced so that it requires the same power to lower as to raise them. The pier is about 90 feet high, and after the cars are dumped, being operated by compressed air at 100 pounds pressure, they run to the end of the pier, are switched and descend to the yard level. The motors are reversed on the return trip and while acting as generators they serve as brakes to the cars.

On Piers 2 and 3 no elevators will be used. A runway with a 13 per cent grade will serve each, and the electrically operated dump cars will be used entirely.

Every precaution is being taken to prevent accidents and to enable checking of each car as it is dumped. No telephones are used. All the dumping and lifting systems are interlocked, and red, white and green lights are used as signals to the operators. Then telautographs are placed in all the operating rooms, and each car is back-checked as it passes to each pier with orders to dump aboard a certain ship.

Electric current is purchased from the Virginia Railway & Power Co. at high voltage and is transformed and converted in the railway company's power house. A 1500 kilowatt converter is to be installed to take care of the additional equipment. Two converters of this size are now being used.

An electric button is placed in the weighing house to operate an electric switch placed above the Barney pit on the

inclines to the dumpers. Should a car get beyond control of the brakeman it is possible to throw the switch and run the car into a side track with a heavy embankment on it, so that no damage will result to car or man.

Work was started on these improvements in June and temporarily Pier 2 has been electrified and is working smoothly. The Walton Construction Co., of Bluefield, W. Va., have the general contract. Sanford & Brooks, Baltimore, have the pile contract for runways, etc.

New Equipment Orders, Etc.

Chesapeake & Ohio Railway has ordered 2 Mountain type and 6 Pacific type locomotives from the American Locomotive Co. They will be built at the Richmond plant.

Baltimore & Ohio Railroad's new equipment program includes the following: 85 heavy Mikado type locomotives, 15 large Pacific type passenger locomotives, 100 passenger train cars, including coaches, combination passenger and baggage cars, dining cars, etc.; 1000 all-steel drop end gondola cars 46 feet and 1000 steel hopper cars of 55 tons capacity, besides 1000 new box car bodies for use on partially used trucks, making practically new cars. In addition to these purchases of new equipment the company is having rebuilt at outside shops 4000 open cars of various types so that they will be practically new when completed. Repairs are also being made at outside shops to 2500 box cars and 2500 open cars. This totals more than 12,000 cars all of which will before very long be in the service. Deliveries are already being made on the gondola cars and the Mikado type engines. In the company's shops more than the normal forces are employed to soon catch up with engine and car repairs.

Illustrative of the effort which the railroads are making to strengthen their supply of equipment for handling the swelling volume of traffic is the fact that the Philadelphia & Reading Railway has decided to build 5 Pacific type passenger locomotives in its own shops at Reading, Pa. The company not long ago ordered 25 Mallet type freight engines from the Baldwin Locomotive Works.

Monroe Municipal Railway, Monroe, La., has ordered 5 street cars from the St. Louis Car Co.

Illinois Central Railroad is reported to have ordered 85 Mikado type locomotives from the Lima Locomotive Works.

Southern Pacific Lines have ordered 73,400 tons of steel rails from the Tennessee Coal, Iron & Railroad Co. and 1600 tons from the Lorain Steel Co.

Baltimore & Ohio Railroad has ordered 2500 tons of structural steel from the McClintic-Marshall Co. for bridge renewal work next year.

Louisville & Nashville Railroad is reported in the market for 2000 steel hopper cars of 55 tons capacity and 1000 box cars of 40 tons capacity. Other inquiries reported in the market are from the Tennessee Central Railway for 4 Mountain type locomotives and the International & Great Northern Railroad is also reported to contemplate buying several locomotives.

Ringling to Build Into New Oil Field.

Surveys have been made for an extension of the Oklahoma, New Mexico & Pacific Railway, which is known as John Ringling's railroad, from Healdton, Okla., northwest about 14 miles to a point near Alma to tap the Graham oil field. A new townsite is to be established and the line, it is said, will give transportation facilities to several other small towns. Mr. Ringling, president of the road, has his office in New York at 636 Fifth Ave. and O. H. McCarty, of Ardmore, Okla., is vice president and general manager.

\$3,000,000 TERMINAL PLAN AT NORFOLK.

Pennsylvania Railroad to Shorten Ferry Haul Across the Bay to 25 Miles.

Plans of the Pennsylvania Railroad to expend about \$3,000,000 for new and improved terminal facilities at Norfolk, Va., were announced last week by Elisha Lee, vice-president, before a joint meeting of the Chamber of Commerce and the Board of Trade, of Norfolk. Construction will not, however, begin until after negotiations have been completed with other railroads entering Norfolk for modifications of traffic arrangements and agreements and this will take some time.

These new terminals are to be used in connection with the freight and passenger service across the Chesapeake Bay to and from the New York, Philadelphia & Norfolk Railroad, which has long been controlled by the Pennsylvania through stock ownership and which on November 1 became an integral part of its system under a 999 year lease. When they are completed and put in use the water journey across the bay will be reduced 11 miles, (from 36 miles to 25 miles), a fact which will enable much better time to be made for both freight and passengers. The company has acquired nearly 1000 acres of land in the vicinity of the mouth of Little Creek near Norfolk and there the new terminals will be built. A deep water artificial harbor will be constructed together with an artificial channel to the bay, and there will also be built yard and terminal track facilities for delivering cars to and from floats and barges. Entrance to Norfolk will be had by obtaining trackage rights over railroads already existing to which necessary connections will be constructed.

An important feature of the plan is to provide improved freight facilities in the city of Norfolk by erecting at St. Julian Ave. a thoroughly up to date freight warehouse with ample team tracks. The property for this has been acquired.

The intent of the company is to gradually transfer its freight car ferry movement from the present southern terminal at Port Norfolk to the new terminal at Little Creek and ultimately the Port Norfolk terminal will be abandoned for through freight, which will then be handled via the new terminal. The present city freight station at Brooke Ave. will also be abandoned for the new warehouse at St. Julian Ave.

Showing the importance of the Pennsylvania Railroad's freight movement across the Chesapeake Bay, Mr. Lee said:

"In 1900 we carried in both directions 35,000 loaded freight cars and 81,000 passengers. In 1910 traffic had increased to 125,000 loaded freight cars and 146,000 passengers. During the war activity traffic increased to 190,000 loaded freight cars a year and the passengers exceeded 500,000 for each of two consecutive years. Both branches of the service are now holding far above pre-war levels and give every promise of steady growth in the future.

"The freight and passenger service which our railroad conducts across the south end of Chesapeake Bay, from Cape Charles to Norfolk, is now and for many years has been the most extensive and important railroad ferrying operation in the world, gauged by the length of the water haul, the volume of traffic and the commercial importance of the service, and it is not difficult to picture an arrangement under which sleeping cars, as well as freight cars, might be ferried across the bay in specially constructed steamers. The advantages of such a plan, from the passenger's point of view, are I think obvious to everyone. It would be possible to take a sleeping car at Norfolk in the evening and wake up next morning in Philadelphia or New York. Coming south passengers would not be disturbed early in the morning for transfer to a steamer but would remain in the car until it reached Norfolk. Possibly one hour might be eliminated from the actual travelling time each way. There is no reason why business men should not look forward to this as a reasonable possibility of the future. The subject will be carefully investigated."

Conditions Affecting the Traffic Movement.

In harmony with its recent order for sending westward freight cars owned by western railroads the car service division of the American Railway Association has issued an order that freight cars on western lines but owned by eastern lines be sent eastward. This is to be done by loading them only for eastern points.

During the week ended October 21 there were loaded throughout the entire country a total of 1,003,759 cars with revenue freight, the largest number loaded in one week for two years, and more than 20,000 cars in excess of the loadings for the previous week, or nearly 30,000 cars more than during the corresponding week of last year, and only about 5000 cars short of the same week of 1920.

A new high record for coal loadings was established during the week ended October 28 the total being 190,276 cars or almost 4000 more than were loaded in the previous week.

Railroad equipment is in an improved general condition according to the latest figures, (October 15), when 270,000 freight cars, or a little less than 12 per cent of the number of cars on lines needed repairs. This was a decrease of over 21,000 cars as compared with October 1. A year ago 15½ per cent of the cars on lines needed repairs.

Big Gains in Earnings on Pennsylvania System.

An idea of how railroad business is swelling may be had from the Pennsylvania Railroad's statement for September which shows that the company's railway operating revenues for that month totaled \$60,712,345 the highest monthly total ever reported, the previous high record having been in October, 1920, when the total was about \$209,000 less. As compared with the same month of last year the total for September shows an increase of more than \$10,300,000 and as compared with August of this year an increase of very nearly \$4,500,000.

For the first nine months of 1922 to September 30 the railway operating revenues of the company were \$459,752,494, an average of considerably more than \$50,000,000 a month notwithstanding the coal strike and the railroad strike. If gross earnings continue in the same ratio for the rest of the year, (and there is every reason to believe that this will be much exceeded), the Pennsylvania System will have total railway operating revenues for 1922 of over \$613,000,000.

Rumanian Contract for Railroad Equipment.

A report from Knoxville, Tenn., says that a \$4,000,000 contract from the Rumanian Government for railroad equipment will be placed (at least in part) with the Sexton-Oliver Operating Corporation that is to succeed the Wm. J. Oliver Manufacturing Company. This, it is stated, was announced by George L. Sexton, an engineer of Philadelphia, after his offer to refinance and rehabilitate the plant was ratified by attorneys representing creditors of the company. This financing, it is further reported, provides for an issue of \$700,000 of second mortgage bonds, \$300,000 of which will be used to satisfy the prior lien of \$300,000 first mortgage bonds outstanding, while the rest will be used to pay the claims of unsecured creditors. Any residue will go to Wm. J. Oliver, owner of the plant and formerly its president. Mr. Sexton is to be president and Ralph E. Oliver, vice president, with James G. Crunbliss treasurer.

Contract for Double Tracking.

A contract has been let by the Norfolk & Western Railway, according to a report from Bluefield, W. Va., to the Walton Construction Co., of that place, to construct grade for second track on its line between Bluestone Junction and Ruth on the Pocahontas division.

TEXTILE

\$385,000 Mill to Produce Cotton and Silk Novelties— Contracts Let for Machinery.

Altavista, Va., November 3—[Special.]—The Altavista Cotton Mills, Inc. will build a plant for the daily production of 20,000 yards of cotton and silk novelties and has awarded contracts for machinery to the Fales & Jenks Machine Co., of Pawtucket, R. I.; Woonsocket Machine & Press Co., Woonsocket, R. I., and the Draper Corp. of Hopedale, Mass.

A 2-story structure will be erected, 100 by 125 feet, and a 1-story building, 130 by 125 feet, bids on these to be opened in December. The cost of the buildings will be about \$100,000 and the machinery installation \$260,000, the equipment to include 13,356 spindles and 300 looms. A power plant to generate 300 horsepower will be installed at a cost of \$25,000.

Lockwood, Greene & Co., Charlotte, are the engineers in charge.

To Further Cotton Spinning Industry of West Texas.

Fort Worth, Tex., November 2—In company with a delegation from the West Texas Chamber of Commerce at the Southern Textile Exposition at Greenville, S. C., Roscoe Ady, Industrial Commissioner, representing the Fort Worth Chamber of Commerce, upon his return to the city said:

"Information on finances which we gained will greatly simplify the problem of establishing cotton mills in Fort Worth and West Texas.

"We interviewed spinners, engineers, textile commission men and machinery manufacturers and all seemed to be absolutely convinced that the cotton spinning industry in Texas eventually will be of great importance in the cotton world.

"I am satisfied that the organization of a mill in Fort Worth is perfectly feasible and will be followed by the establishment of other mills in West Texas. We already have available in this city a mill building well adapted to our plans which will accommodate 20,000 spindles and we have received assurances of financial support from business men of the city. I am satisfied we shall be able to put a mill in operation in the near future.

"There were several thousand men at the exposition and we spent three days inspecting the machinery and supply exhibits and interviewing men of authority. We went through three of the largest mills in Greenville."

Heavy Exports of Cotton.

Galveston, Tex., Nov. 4—[Special.]—Cotton exports from Galveston promise to be unusually heavy during the present month. On the last day of October the steamship Jacona sailed for Italian ports with a crop of 16,263 bales of cotton which it took on here. This is said to have been the largest cotton cargo loaded at Galveston during the last four years. Of the Jacona's shipments, 14,863 bales are destined for Genoa and 1400 bales for Naples. It is indicated that the demand for cotton by European countries is growing stronger; also that unusually large shipments will be made to Japan this season.

Increase of Capital from \$1,250,000 to \$2,500,000.

Greenville, S. C., November 2—At a meeting of the stockholders of the Judson Mills to be held here November 28, plans for increasing the capital stock from \$1,250,000 to \$2,500,000 will be considered. It is stated that the stock will be divided into shares of \$100 par value.

The mills operate 52,640 spindles, 9576 twister spindles and 1288 looms in the production of India lawns, fancy dress goods, combed reeler yarns, ball, warps and skeins. B. E. Geer is president and B. S. Mills, secretary.

GOOD ROADS AND STREETS

Contracts for Road and Bridge Construction in North Carolina Total \$1,657,000.

Raleigh, N. C., November 1—[Special.]—The State Highway Commission has awarded contracts for road and bridge construction, covering a number of projects and located in several counties, aggregating a mileage of 72.50 and costing \$1,657,265.10.

Contract for 4.23 miles of concrete road between the Pitt county line and Washington in Beaufort County was awarded to the Public Service Production Co. of Newark, N. J. at \$129,905.75, and to the same company for 5.04 miles of concrete road from Bunyan east toward Belhaven at \$149,365.10. The J. L. McGehee Contracting Co. of Tarboro will construct 2 miles of concrete road in Beaufort County from Belhaven east toward Leaksville at a cost of \$71,672. C. W. Lacy of Wilmington secured the contract for grading 14.07 miles in Gates and Pasquotank counties, from Sunbury to Jackson Corner, at \$91,013, and the Pittsburgh-Des Moines Steel Co. of Pittsburgh, Pa., for building structures, at \$34,463.65.

Contract for grading 10.89 miles in Hyde County from Rose Bay to the Beaufort county line was awarded to O. A. Mann & Co. of La Grange, Ga. at \$70,194, and for the erection of structures to the same contractors at \$29,928. The Union Paving Co. of Philadelphia was awarded contract for the construction of 14.53 miles of asphaltic concrete road in Duplin County, between Warsaw and the Wayne county line, at \$355,955.50, and for the construction of 14.22 miles of hard surface road in Wayne County, from Goldsboro to the Duplin county line, at \$352,946.50.

A. D. Wardrep of Knoxville was awarded contract of \$292,527.40 to construct 7.52 miles of hard surface road in Buncombe County, from Mine Hole Gap to Hickory Nut Gap, and the Roanoke Iron & Bridge Co. of Roanoke, Va. secured contract at \$64,942 to construct a draw bridge and approach at Grifton for Lenoir and Pitt counties. For the construction of a bridge over Black Creek in Wilson County, contract was awarded to Stearns Bros. of Statesville at \$14,343.45.

In addition to these contracts, 9.89 miles of hard surface road will be constructed in Chowan County, from Edenton to Centre Hill, State forces doing the work.

\$305,000 for Tennessee Roads and Bridges.

Nashville, Tenn., November 1—[Special.]—The Phillips, Simpson & McGuinn Contracting Co. of Nashville has been awarded contract by the State Highway Department at \$161,849 for the construction of a section of Federal Aid road in Smith County, extending from Carthage to the Wilson County line. The same firm also received contract for bridges along this line to cost \$61,929.

Contract has been awarded at \$80,971 to the J. G. Gray Construction Company of Martin, Tenn., for building a section of Federal Aid road in Lake and Obion Counties.

Impressive Stretch of Road Construction in North Carolina.

Mooresville, N. C., November 3—As contributing in no small degree to the uninterrupted construction of the Mooresville-Shepherd section of the highway between Charlotte and Statesville, the co-operative attitude of the people directly interested in the road is especially commented on by James B. Brickell of Mooresville who has charge of the construction forces of the Thompson-Caldwell Construction Co., contractors for building the road. Mr. Brickell states that the farmers along the highway have not been a hindrance by criticism or law suits, because of some one driving over

their lands, or because of other inconveniences to which they were subjected, but were helpful and co-operative in many ways. As a result, work on the road has been steady and efficient and the road itself has been referred to as one of the best constructed pieces of highway in North Carolina.

About a year ago the Thompson-Caldwell Construction Co. was awarded contract and began a 6-mile section of road from Mooresville to the Mecklenburg county line. This part of the work was completed the first of last August and the company then began the construction of the northern end of the road from Mooresville to Shepherd. Mr. Brickell has direct charge of grading, laying the 5-inch concrete base, placing the pipe lines, building headwalls 7 inches on either side of the concrete, beside handling other details; C. E. Langley is the resident engineer, J. B. Moore, rodman; L. B. Peck, instrument man; A. W. Hines, concrete inspector and Harris Mills, material inspector. No materials are permitted to enter into the construction of the road that are not up to required specifications. The asphaltic top is now being placed and it is thought the road will be ready for traffic by the last of November. It is built to withstand 8½ tons for 12 inch tires.

Dallas County to Expend \$516,000 for Roads.

Dallas, Tex., November 1—At a bid of \$200,364.06, the Dallas County Commissioners have awarded contract to Wear & Thomas for surfacing 14½ miles of road, extending from the city limits to Dallas to the Ellis County line. Contract was also let to Fuller & Co., at \$221,741.08, for constructing the base of the road. In addition to this the county will furnish 31,300 cubic yards of crushed stone and 40,000 cubic yards of native stone at a cost of \$94,000.

The road will be constructed with a rock macadam base and surfaced with a 1½-inch asphaltic binder course, which will be topped with a one-inch sheet of asphalt. Three grade crossings on the present road will be eliminated by the construction of underpasses where railway tracks intersect the road.

Tide Water Power Company Purchases Three Utility Plants.

Wilmington, N. C., November 1—Following a meeting of stockholders which voted to increase the capital stock from \$2,600,000 to \$4,100,000 the Tide Water Power Co., A. E. Fitkin, President, has announced the purchase of the St. Petersburg Lighting Co. of St. Petersburg, Fla.; Clearwater Lighting Co., Clearwater, Fla., and the Commonwealth Light & Power Co. operating in western states and under the management of the General Engineering & Management Corporation of New York. Options for the purchase of other public utility corporations in the South have also been secured.

Bonds to finance the purchases of the Tide Water Power Co. are said to have been bought by a number of banks, but it is stated that there will be no change in the present board of directors of the company, except that interests associated with Mr. Fitkin will add two additional representatives to the board.

Will Dig Drainage Canals—\$200,000 Voted.

Lake Providence, La., November 1—[Special.]—The Tensas Bayou Drainage District of which F. H. Schneider is president plans to dig drainage canals and will sell \$200,000 of bonds for this purpose. Details are being worked out and bids on the dredging work will be invited after the bonds are sold.

LUMBER AND BUILDING MATERIALS

Supply of Brick No Longer Affected by Coal Strike— Accumulation is Due to Season.

The common brick industry has recovered from the coal strike as far as supply is concerned, says the Monthly Digest of the Common Brick Manufacturers' Association of America. The high price of coal, however, is the main factor in advancing costs of manufacture. Out of 81 firms reporting to the Association in October, only 2 were closed for lack of coal and one by car shortage.

"The general production of common brick begins to reflect the usual seasonal conditions," continues the digest. "The total production for the month was 95,192,000 and the amount of brick removed from the yards was 78,000,000. As shown by the table below, the stock on hand is 190,756,000 as compared with 173,361,000 of burned brick on hand a month ago. The amount of unburned brick on hand is 42,162,000 as compared with 44,089,000. There is also a slight reduction of orders on the books, the current figure being 234,328,000 as against 265,878,000 on the first day of September.

"For the first time during the year Chicago plants are building up reserve stocks, and this city Cleveland, the largest producing center of brick in America, is usually a fair barometer of conditions throughout the country.

"During the last two months the demand for brick has greatly improved in some sections of the country which have had a dearth of orders during a greater part of the present year. This is noticeable in the Southeastern states, and quite generally throughout the South. There is only one section of the country today which is not doing a fair volume of building, and that is that agricultural part of the Middle West with Iowa, Nebraska and Kansas as its center. Business continues in about the normal season's volume in the cities along the New York Central Railway, from New York to Chicago, in New England, Pennsylvania, and quite generally throughout the industrial regions of the Central West. The Pacific coast is still going strong with the demand equal to the supply, from San Diego to Seattle.

"Some reductions in the freight rate on brick are promised at an early date. The manufacturers generally look upon this as a favorable indication of improved business. It is generally felt that brick has been openly discriminated against in freight rates since the war. The much discussed General Order No. 28, which put a two-cent charge per hundred pounds upon brick rates as a means of discouraging manufacture and shipment, and in order that labor, fuel and transportation might be turned to war purposes, never was removed. On top of that radical advance, there have been other freight advances seriously affecting the moving of this heavy commodity and adding to the cost of building.

"The consumer of brick will have the benefit of any reduced rate immediately, and in many localities this will result in a worth while reduction in the price of brick on the job."

Shipments Still Exceed Orders.

Norfolk, Va., November 2—[Special.]—For the week ended October 28, the North Carolina Pine Association reports orders for 8,474,603 feet, an average of 201,776 feet per mill, and shipments of 11,476,659 feet, or an average per mill of 273,254 feet. Production reached a total of 10,317,116 feet, an average per mill of 245,646 feet. Decrease in orders as compared with last week was 24 per cent.

The summary for the week, 42 mills reporting, is as follows:

	Total Feet	Average Per Mill
Orders.....	8,474,603	201,776
Shipments.....	11,476,659	273,254
Production.....	10,317,116	245,646
Normal Production.....	12,750,000	303,571
		Per Cent
Orders Below Shipments.....	3,002,056	26
Orders Below Actual Production.....	1,842,513	18
Shipments Above Actual Production.....	1,159,543	11
Orders Below Normal Production.....	4,275,397	33
Shipments Below Normal Production.....	1,273,341	9
Actual Production Below Normal.....	2,442,884	19
Decrease in orders compared with last week.....	2,741,710	24

Oklahoma City Builders Organize Exchange.

Oklahoma City, November 3—Contractors, subcontractors, material dealers and manufacturers have organized the Builders' Exchange of Oklahoma City with Martin J. Reinhart as president. Other officers include Ray Hansen, Vice Prest.; C. G. Hill, Second Vice Prest., and J. B. Landers, Secy.

The object of the exchange as outlined by Mr. Landers is as follows:

"To protect the interest of its members, their employees and the public, to promote steadiness of employment in building trades, to supervise the making of trade agreements respecting the employment of labor by its members, and to insist upon the fulfillment of such agreements both in letter and spirit.

"We wish to promote the settlement of labor disputes by preventing strikes and lockouts, to encourage the formation of associations of contractors and sub-contractors and material dealers and to promote and protect the business interests of its members and its allied associations and to protect the public against fraudulent business practices."

Lower Freight Charges on Lumber to Certain Points.

New Orleans, La., November 1—[Special.]—The Southern Pine Association, at a recent meeting held in Atlanta with officials of the Southeastern railroads, made final arrangements for checking in through rates from Southern pine producing territory to points on the Chesapeake & Ohio Railway, Louisville & Nashville Railroad, Norfolk & Western Railway, Southern Railway and Virginian Railway in Virginia, West Virginia, North Carolina, Kentucky and other Middle Eastern States.

The through rates are in lieu of the higher combination rates which heretofore have applied and the changes will result in lower transportation charges to certain points.

Tabulated Report as of October 1, 1922.

District No.	Including States of	No. of Firms Reporting	Plants Closed	Burned Brick on Hand	Unburned Brick on Hand	Orders on Books	Price Per Thousand at Brickyard	Price at Brickyard Sept. 1, 1922
1.	New York, New England.....	5	1	4,053,000	4,785,000	3,326,000	\$13.00 to \$18.00	\$14.00 to \$18.00
2.	Pennsylvania, New Jersey, Maryland, District of Columbia, Delaware.....	9	1	8,210,000	10,258,000	26,681,000	14.00 to 19.00	13.00 to 18.00
3.	Virginia, North Carolina, South Carolina, Georgia, Florida.....	5	1	820,000	911,000	2,408,000	14.00 to 18.50	12.00 to 18.50
4.	Michigan, Ohio, West Virginia.....	11	2	3,707,000	8,490,000	12,409,000	12.50 to 18.00	12.50 to 18.00
5.	Illinois, Indiana, Wisconsin.....	25	2	156,674,000	4,677,000	170,524,000	11.00 to 15.50	10.50 to 15.50
6.	Kentucky, Tennessee, Mississippi, Alabama, Arkansas, Louisiana.....	10	0	5,599,000	5,426,000	12,567,000	9.25 to 16.00	9.15 to 16.00
7.	North Dakota, South Dakota, Minnesota, Nebraska, Iowa, Kansas, Missouri.....	5	3	2,758,000	99,000	520,000	10.50 to 18.00	15.50 to 15.00
8.	Oklahoma, Texas, New Mexico.....	5	1	5,545,000	1,030,000	1,108,000	7.50 to 12.00	8.00 to 12.00
9.	Washington, Oregon, Montana, Wyoming, Idaho, Utah, Colorado.....	3	0	259,000	350,000	835,000	13.50 to 16.00	13.50 to 16.00
10.	California, Arizona, Nevada.....	3	0	3,131,000	6,136,000	3,950,000	14.50 to 15.50	14.00 to 15.50
		81	11	190,756,000	42,162,000	234,328,000		

The Southern Pine Association, through its traffic department and special committee, has been seeking to obtain this action by the railroads since last January. At the Atlanta conference, the Association was represented by L. J. Hollands, traffic manager of the J. J. Newman Lumber Co. and chairman of the Association's special committee.

Great Divergence in Lumber Conditions.

Washington, November 2—While telegraphic reports to the National Lumber Manufacturers Association from eight of its regional softwood associations for the week ending October 28 indicate that the lumber industry is holding well, they also show great divergencies of conditions in different sections. On the whole, production continues at virtually peak capacity and, while much greater than shipments and orders, the last named factors are no longer declining relatively to the first.

It is true that the reports show an absolute reduction of about 14,000,000 feet in production, of 15,000,000 feet in shipments and 6,000,000 in orders from the preceding week, but the number of reporting mills fell last week to 394 from 434—high number of the year—reported the week before. Lumber production is holding up well above the average of recent years, and shipments and orders show a proportionate increase. In Southern pine territory the worst of the car shortage difficulty seems to be over. Shipments are getting larger. On the other hand the California, Oregon and Washington mills seem now to be in the worst transportation pinch they have had for a long time. Shipments in that region are falling off despite increased production, and some mills actually report that cars delivered to them are only ten per cent of their requirements. In the middle northern regions—in the white pine and hemlock territory—the statistics indicate easy transportation conditions, as shipments are as much as 50 per cent greater than production.

Stated relatively, shipments and orders for the eight associations were each 75 per cent of production for the past week. Of the 394 mills reporting, 368 belong to the five associations that have a normal production figure for the week, which is 235,956,767 feet. Actual production for them was 98 per cent, shipments 72 per cent and orders 73 per cent of this figure. The following table gives the lumber movement figures for the past week in comparison with the corresponding week last year, and the preceding week this year, revised:

Mills	Last Week 394	Same Week Last Year 373	Preceding Week 434
Production	247,081,717	174,815,854	280,619,183
Shipments	184,861,045	205,710,689	199,920,350
Orders	185,501,154	191,999,023	191,478,659

For October, four weeks, production was 994,628,948 feet by the reporting mills as compared with 725,065,030 in October, 1920, and 710,700,896 in October, 1921. Shipments for the three Octobers in the same order, were 749,508,408, 595,601,122, 801,012,993; and orders, 747,490,380, 470,081,712, 858,561,591.

Reports by regional associations follow:

LUMBER MOVEMENT FOR 43 WEEKS, AND FOR THE WEEK ENDING OCTOBER 28

	Production 1922	1921	Shipments 1922	1921	Orders 1922	1921
Southern Pine Association, Total.....	3,169,089,458	2,983,016,792	3,053,055,091	3,146,910,109	3,203,322,955	3,194,042,681
Week (127 mills).....	74,736,683	68,178,513	64,569,076	88,807,712	58,552,208	81,160,864
West Coast Lumbermen's Association, Total..	3,604,006,403	2,235,752,834	3,383,075,687	2,336,524,452	3,425,468,761	2,385,985,764
Week (153 mills).....	109,604,012	68,532,925	71,089,558	67,698,676	78,738,343	64,223,559
Western Pine Manufacturers Association, Total	1,009,315,000	626,100,082	1,038,423,000	591,147,728	1,054,300,000	597,350,000
Week (42 mills).....	29,583,000	14,196,000	18,014,000	21,639,000	20,875,000	20,725,000
California White and Sugar Pine Manufacturers, Total.....	433,909,000	284,298,000	287,426,000	206,433,000	656,186,000	374,147,000
Week (4 mills).....	6,894,000	4,504,000	3,161,000	5,734,000	2,930,000	2,046,000
California Redwood Association, Total.....	336,853,000	242,113,000	300,569,000	168,819,000	317,531,000	164,916,000
Week (15 mills).....	10,680,000	7,807,000	9,628,000	5,377,000	7,993,000	9,341,000
North Carolina Pine Association, Total.....	401,330,541	273,107,704	404,909,111	263,369,753	402,207,293	259,160,835
Week (26 mills).....	6,594,617	10,312,416	6,479,467	12,529,281	5,379,603	10,759,600
Northern Hemlock and Hardwood, Total.....	87,324,000	85,340,000	121,544,000	80,888,000	110,962,000	74,198,000
Week (18 mills).....	1,629,000	1,285,000	2,482,000	3,925,000	1,861,000	3,743,000
Northern Pine Manufacturers Association,						
Total.....	377,946,250		352,431,964		349,619,000	
Week (9 mills).....	7,450,405		9,437,944		9,172,000	
General Total for 43 weeks.....	9,419,773,652	6,729,728,412	8,941,523,853	6,794,092,042	9,519,596,009	7,049,800,280
General Total for week.....	247,081,717	174,815,854	184,861,045	205,710,689	185,501,154	191,999,023

Weekly Report on Southern Pine.

New Orleans, La., November 1—[Special.]—The report of the Southern Pine Association for the week ended October 30, indicates orders on hand at the beginning of the week for 17,463 cars or 392,061,813 feet, and at the end of the week, 17,195 cars or 386,044,945 feet.

Shipments were 13.60 per cent below production for the week, while orders were 21.06 per cent below production and orders below shipments, 9.32 per cent. The average shipments per mill were 508,418 feet as compared with 475,537 last week, and the average production was 588,478 feet as against 578,643 feet last week.

Summary of Report from 127 Mills.

	Cars	Feet
Orders on hand beginning of week....	17,463	392,061,813
Orders received during week.....	2,608	58,552,208
Total	20,071	450,614,021
Shipments during week.....	2,876	64,569,076
Orders on hand end of week.....	17,195	386,044,945

An Illustration of the "Ideal" Method of Brick Laying.

Norfolk, Va., October 25—[Special.]—The Nansemond Brick Corporation, with offices in the Law Building in the business section of the city, has utilized a unique and interesting method to impress purchasers with the various uses of brick, by having the side walls of its offices, the floors, the dividing partitions and the windows all finished in brick of many types



AN INTERESTING ADAPTATION OF IDEAL BRICK WALL IN OFFICE CONSTRUCTION.

laid in a number of designs. The side wall panels show the several types of brick laid with different mortar joints, so that the prospective builder can see how a brick thus laid will look in the wall of his home. The floor shows a variety of styles for porch and sun parlor floors, sidewalks, fire-place hearths, etc.

The Ideal brick wall is illustrated in the windows of the

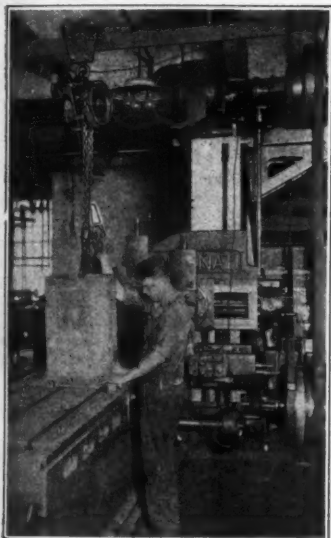
offices. The Ideal method of laying brick has been widely adopted. It saves in mortar, labor and in bricks, by providing a free air space between the bricks forming the interior and exterior of the wall. It is said that plaster may be applied direct to the interior without the necessity of furring and lathing.

Scores of brick houses are being erected in and about Norfolk, and it is declared that the demand for such homes is steadily increasing as a result of the vigorous advertising campaigns under way by the various brick manufacturers associations.

MECHANICAL

A Handy Device for Handling Materials.

An electrically operated material handling device, known as the "Motorbloc," has been placed on the market by the Motorbloc Corporation of Summerdale, Philadelphia, Pa. It has been developed, it is announced, to perform operations lying between the field of the standard chain hoist and that of the traveling electric hoist, and with substantial overhead and electrical installation which its heavy duty requires. It can be installed without engineering preliminaries in any location where electric current is available. It may be put in service as easily as an electric drill or a vacuum cleaner, and its pendant controller gives convenient operation as soon as the plug is placed in the nearest electric receptacle.



THE NEW BLOCK IN USE.

proportioned to stand up under severe overloads and abuse. If operated by ignorant or inexperienced persons.

Extreme care has been given to features of compactness, symmetry and balance, combined with lightness and strength, through the use of the highest grade of materials, it is noted, and of such proportions as to meet the harest service conditions. The armature shaft and worm are carried in strong ball bearings and there is ample automatic lubrication. The pendant controller is easily operated with one hand so that the other hand is free to guide the load. The ready portability of the entire device is apparent when it is known that the one-ton size complete weighs only 148 pounds.

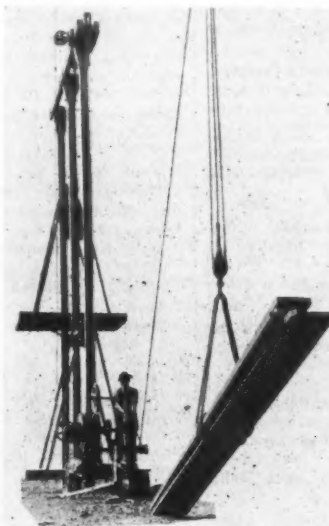
The picture shows how one of these electric blocks can be hooked up in any part of a factory, garage or warehouse to speed up the handling of various materials without fatiguing

The device consists of a standardized chain hoist of steel construction which has applied to it a specially designed heavy duty motor, liberally proportioned reduction gearing and slip friction clutch, applied by means of a malleable iron supporting bracket comprising a self contained electrifying unit to which the pendant controller is also attached. Thus the standard spur-gear chain hoist is electrified in capacities of from one quarter of a ton to ten tons, and is

work or elaborate preparations. At points where electric current may not be available, or if current should fail, temporarily, the hand chain can be quickly applied and the hoist may thus be used as an ordinary block. Moreover, the self-contained electrifying unit can be readily applied to standard chain hoists already in service should that be desired.

Contractors' Portable Electric Hoist.

A new electric hoist shown in the accompanying illustration is designed for economical and speedy use by contractors, and the manufacturers, the Moffatt Machinery Manufacturing Co., Charlotte, N. C., say that it has been thoroughly tested by some of the largest and best builders in the country and that it is most economical for handling building materials.



THE HOIST IN OPERATION.

Being mounted on a three-wheeled truck the hoist can be turned in a very small space and it may be moved from place to place by two or three men. It requires no foundation except anchorage to the floor or to the ground. As shown in the picture the hoist has two cars, which are made mostly of steel well riveted and bolted together, and as they are exactly balanced, no load is handled excepting the actual live load. The guide posts and rails are furnished in built-up sections, and any height can be accommodated by coupling

up sections as may be necessary. These sections are cut to fit and are clamped in place by bolts, the bolt holes all being duplicates. The guide posts and rails being supplied with the machine no tower is necessary. Only one hoisting cable is used, the surplus hoisting cable being carried on a small drum mounted on the crosshead of one of the cars.

It is not necessary to have an operator as the machine is made to stop automatically at the top and the bottom landings with absolutely no over-travel. It can be started from either top or bottom and the cost of current consumption is stated to be extremely low, the motor being directly connected to the worm shaft; it consumes current only while the cars are in actual motion up or down, the motor stopping when the cars are not moving.

This hoist is also equipped with a clutch spool attachment which can be used with block and fall for handling heavy timber, steel beams, etc., as shown in the illustration. Only the shifting of a lever is necessary to change from one method to the other.

Two Passenger Ships Between Miami and Baltimore.

Miami, Fla., November 3—The purchase of two vessels by the Baltimore & Carolina Steamship Co. with a view to inaugurating passenger service between Miami and Baltimore has been effected. These vessels are the Tipton and the Plainfield, both having a tonnage of 3600 and being more than 300 feet long with a 45-ft. beam. Accommodations for 250 passengers on each boat will be provided, as well as specially arranged space below deck for transporting automobiles. The name of the Tipton has been changed to Esther Weems and the Plainfield to Mary Weems.

Construction Department

EXPLANATORY

Additional information is published about all enterprises mentioned in this department as soon as such data can be obtained. Further facts about any incomplete or incorrect item reported in these columns are always appreciated.

DAILY BULLETIN

The Daily Bulletin is published every business day to enable its subscribers to follow up promptly the industrial, commercial, railroad, financial, building and general business development of the South and Southwest. To machinery manufacturers and dealers, contractors, engineers, and others who require daily information of every new enterprise organized and details about important additions to enterprises already established, the Daily Bulletin is invaluable. Subscription price, \$20.00 a year.

Bridges, Culverts and Viaducts.

Ark., Jasper—Newton County Quorum Court plans expending \$80,000 for 6 bridges, including span over Little Buffalo River at Jasper, on Jefferson Highway.

Ark., Little Rock—Pulaski County Comms., Road Improvement Dist. No. 10, will build 4 steel and concrete bridges. For full details see Mch. Wanted—Bridge Construction.

Ark., Mount Ida—Montgomery Quorum Court plans building 4 bridges and improving 1 bridge:

Two over Caddo River.

One over Lick Creek near Womble.

16-ft. bridge on Albert Pike highway at Amerson Ford on Ouachita River.

Repair Mount Ida Bridge over South Fork; total cost \$50,000.

Fla., Jacksonville—Duval County will repair 3 steel bridges and construct reinforced concrete bridge as follows:

Over Six Mile Creek on Lem Turner road.

Over Big Pottsburg Creek and Pablo Creek on Atlantic Blvd.

Build reinforced concrete bridge over Big Fishweir Creek on Orange Park road; Geo. B. Hills, County Engr.; will invite bids soon. (Lately noted.)

Fla., Tampa—Hillsborough County, plans constructing \$50,000 reinforced concrete bridge on State Road No. 5, near Sulphur Springs; A. B. Pimm, County Engr.

Ga., Brunswick—St. Simon's Highway Comsn., Glynn County Comms., will build 2 bridges. For full details see Mch. Wanted—Bridge Construction.

Ga., Columbus—City Comsn. has tentative plans for construction of viaducts at 13th and 10th Sts.

Ky., Paducah—McCracken County Fiscal Court plans building 40-ft. steel span bridge on Vasseur Ave.; concrete abutments.

Md., Baltimore—City will build steel and reinforced concrete bridge. For full details see Mch. Wanted—Bridge Construction.

Missouri—State Highway Dept., Jefferson City, Mo., plans following bridges: Stoddard County, on State road north and south of County; Federal Aid Project No. 197.

Sta. 898 plus 27, over Link Creek; 30-ft. reinforced concrete deck girder span; 2 reinforced concrete abutments; 18-ft. roadway.

Sta. 102 plus 05, over Lick Creek; 60-ft. steel truss span; concrete floor; 18-ft. roadway; 2 reinforced concrete abutments.

Sta. 854 plus 30; 30-ft. reinforced concrete deck girder span; 2 reinforced concrete abutments; 18-ft. roadway.

Sta. 1094 plus 40, over Jackson Creek; 30-ft. reinforced concrete deck girder span; 2 reinforced concrete abutments; 18-ft. roadway; Frank B. Newton, Div. Engr., Sikeston, Mo.

Washington County, on State road from Potosi to Berryman; Federal Aid Project No. 160.

Sta. 549 plus 38, over Little Fourche, A Renant Creek; 24-ft. reinforced concrete deck girder span, skewed; 2 reinforced concrete abutments; 18-ft. roadway.

Sta. 524 plus 70, over Race Creek; 20-ft. reinforced concrete slab span; 2 reinforced concrete abutments; 18-ft. roadway.

Sta. 604 plus 10, over Fourche, A Renant Creek; 80-ft. steel truss span; concrete floor; 2 reinforced concrete abutments; 18-ft. roadway; S. M. Rudder, Div. Engr., Bristol Bldg., Webster Grove, Mo.

Missouri—State Highway Dept., Jefferson City, Mo. let contracts for following bridges:

Lewis County—Sta. 35 plus 20 on State road from Monticello to Canton, Smith bridge; 12 ft. reinforced concrete slab span, 2 reinforced concrete abutments, 24 ft. roadway; State Project 6, section 60, to Henderson Washam, Jacksonville, Mo. at \$3462.85.

Oregon County—Sta. 1588 plus 40 on State road from Alton to Ripley County line, State project Route 42, Sec. 4; 30 ft. reinforced concrete deck girder span, 2 reinforced concrete abutments, 20 ft. roadway, to Will F. Plummer, Inc., Springfield, Mo. at \$6977.40.

St. Charles County—State Project Route 2 Sec. 72, on state road from Warrenton to St. Charles over Spencer Creek, Sta. 1106 plus 30; 35 ft. reinforced concrete deck girder span, 2 reinforced concrete abutments, 20 ft. roadway.

St. Charles County—State Road Project Route 2, Sec. 70, on State road from Warrenton to St. Charles over Peroque creek, Sta. 604 plus 29; 80 ft. steel truss, concrete floors, two 20 ft. reinforced concrete slab approach spans each end, 2 reinforced concrete piers, 4 reinforced concrete pile bents, 20 ft. roadway.

St. Charles County—State Project, Route 2, Section 73; 20 ft. reinforced concrete span, 2 reinforced concrete abutments, 24 ft. roadway; Sta. 1334 plus 74, to Moreno Burkham Construction Co., St. Louis, Mo. Vernon County—Sta. 421 plus 32 on State road from Nevada to Eldorado Springs; 30 ft. reinforced concrete deck girder span; 2 reinforced abutments, 20 ft. roadway, State Project Route 26, Sec. 6 to Moss and Moss, Nevada, Mo. at \$3659.80.

Mo., Galena—State Highway Dept., Jefferson City, Mo., and Katy and Frisco R.R., plan building viaduct over Frisco tracks; \$20,000; each to pay \$10,000.

Mo., Harrisonville—Cass County Comms. For full details see Mch. Wanted—Bridge Construction.

Mo., Mexico — J. W. Gallaher, Mayor, plans building viaduct across railroad tracks at Washington St.

Mo., Mt. Sterling—State Highway Dept., Jefferson City, Mo. For full details see Mch. Wanted—Bridge Construction.

N. C., Beaufort—For full details See Land Developments.

N. C.—Winton State Highway Dept., Raleigh, N. C., plans building bridge at Winton, route No. 30; Project No. 148.

S. C., Columbia—Richland County Permanence Roads Comsn. opened bids for construction of concrete bridges over Cedar and Crane Creeks; General Road Drainage & Construction Co., Columbia, at \$26,012 lowest bidder. (Lately noted.)

Tex., Beaumont—Jefferson County Comms., Court, J. B. Peek, County Judge, approved changed plans for building Ash St. bridge over Neches River; construct 150-ft. steel spans at either end of bascule span; 2000-ft. concrete approaches; A. C. Love, County Engr. (Lately noted.)

Tex., Canton—U. S. Dist. Engr., Fort Worth, Tex., approved plans for timber pile trestle bridge with gravel surfaced approaches, through Neches River Bottoms, between Van Zandt and Smith Counties \$13,000; C. L. Hubbard, County Judge; F. W. Gaines, County Engr.

Tex., Houston—O. F. Holcombe, Mayor, received bids for 330-ft. reinforced concrete bridge at Cleveland Park, connecting South End and Houston Heights, via Waugh's Drive; R. M. Reagan, at \$69,315, low bidder. (Lately noted.)

Virginia—State Highway Comsn., Richmond, Va., will build and repair 4 bridges. For full details see Mch. Wanted—Bridge Construction.

Va., Petersburg—City, Mayor Zimmer plans expending \$300,000 to construct overhead bridge connecting Colonial Heights with city.

W. Va., Dundon—Elk River Coal & Lumber Co., let contract to Phoenix Bridge Co., Phoenixville, Pa., for 6 steel bridges for its subsidiary, Buffalo Creek and Gauley R. R. (Lately noted.)

Canning and Packing Plants.

Fla., Stuart—St. Lucie Packing Co. reorganized with C. F. Early, Prest., Carroll Dunscomb, V. P.; J. A. Aigler, Secy., increased capital to \$150,000; has leased part of plant of St. Lucie Products Co.; later will construct own plant.

Md., Baltimore—Old Point Packing Co., 1013 Light St., increased capital to \$75,000.

Miss., Crystal Springs—Mays Product Co., New Orleans, La., will install canning plant.

Mo., St. Louis—Missouri Kosher Packing Co., capital \$65,000, inceptd. by N. Harris, Sol Goldman, Louis Cohen.

Tex., Harlingen—Valley Packing Co., capital \$15,000, inceptd. by H. R. Mills, Oscar Roman, C. B. Wood.

Coal Mines and Coke Ovens.

Ala., Alco, P. O., Peterson—Alco Coal Co., Fleetwood Rice, Gen. Mgr. has expended \$56,000 on wiring system for transmission of electricity from Alabama Power Co. to the hydraulic coal mining plant, daily capacity by new method about 500 tons, estimated out-

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put when more fully developed from 800 to 1000 tons.

Ky., Smalley—Elkhorn Gas Coal Co., H. W. Crockett, Secy., Bluefield, W. Va., has 1528 acres under development; daily capacity 6 cars; has plans for electrifying of mines; F. W. Gesling, Const. Engr., Ashland, Ky. (Lately noted increased capital.)

Md., Cumberland—Helen Coal Mining Co., capital \$50,000, inceptd. by Robert Grant, F. Somerville, M. H. Grant.

S. C., Columbia—Reamer Fuel Co., will increase capital to \$25,000.

Virginia—Smokeless Fuel Co., inceptd. by Lewis Littlepage, Norfolk, Va., with \$400,000 capital, to operate mines in Virginia.

W. Va., Charleston—Alpine Coal Co., capital \$250,000, inceptd. by W. E. Wright, E. L. Mochie and Duke W. Hill.

W. Va., McDowell County—Henry Ford, Detroit, Mich., reported to have purchased Dex-Car Pocahontas Coal Co.'s mine, daily capacity 30 cars.

W. Va., Quinnimont—J. L. Beury Estate, capital \$225,000, inceptd. by R. T. Hubbard, F. R. Bacon and T. H. Mahood, all Fayetteville, W. Va.

W. Va., Ronceverte—Midland Smokeless Coal Co., capital \$50,000, inceptd. by L. E. McClung and B. M. Higginbotham of Rupert, and C. H. Drornparnce, Ronceverte.

W. Va., Wayne and Kanawha Counties—Huntington Coal & Mining Co., J. M. Hall, Secy.-Treas., Huntington, W. Va., will expend \$265,000 on development of about 2000 acres in Floyd County, Ky., and Wayne and Kanawha Counties, W. Va.; let following contracts; for \$42,000 tippie at Harkins mines; to Fairs Bridge Co., to construct bridge across Big Sandy river; erect power plant to supply power for mine No. 3 all mines to be electrically equipped; construction to be completed by July 1, 1923; also for dwellings, store, school house, etc.; bids open for installation of sanitary sewers; let contracts for equipment to Skinner Engine Co., Erie, Pa., and General Electric Co., Schenectady, N. Y.

W. Va., Williamson—W. F. Toney Coal Co., capital \$25,000, inceptd. by J. B. Henry, W. F. Toney, Frank Crum.

Cotton Compresses and Gins.

Ark., Blytheville—Blytheville Gin Co. will rebuild burned plant.

Ark., Hope—Temple Cotton Oil Mill will rebuild plant, burned at loss of \$10,000.

Miss., Rosedale—Rosedale Compress Co. will rebuild plant burned at loss of \$40,000.

Tex., Amarillo—Panhandle Plains Chamber

of Commerce interested in establishing cotton gin.

Tex., Shiner—F. J. Luedecke Gin & Mill Co., capital \$13,000, inceptd. by F. J. Luedecke, Ben St. Luka, Otto Renken.

Drainage Systems.

La., Providence—Tensas Bayou Drainage Dist., and 1st. and 2nd. Wards Drainage Dist. For full details see Mch. Wanted—Drainage.

Miss., Tunica—McKinney Lake Drainage Dist., Tunica County let following contracts: Contract No. 1—680,000 cu. yds. floating dredge work.

Contract No. 2—411,000 cu. yds. floating dredge excavation, 38 acres clearing t Winston Dredging Co., Louisville, Miss., at \$110,000.

Contract No. 3—197,250 cu. yds. dry land excavation.

Contract No. 4—214,000 cu. yds. dry land excavation.

Contract No. 5—167,000 cu. yds. dry land excavation, to A. M. Alexander, Rosedale, Miss., at \$80,000; reclaiming about 32,000 acres; Southern Engineering Co., Engr. (Lately noted.)

Electric Light and Power Plants

Ala., Birmingham—For full details See Water Works.

Fla., Center Hill—For full details See Land Developments.

Fla., Jacksonville—Frank H. Owen, Commr. of Public Utilities, contemplate installing 12,500 K.W. turbo-generator at city electric plant; also contemplate improvements to all sub-stations; construct addition to main plant; place high tension lines underground from main plant on Talleyrand Ave. to main sub-station at Main and First Sts.; cost of improvements about \$500,000; Frank Daugherty, V.-P.; Scofield Engineering Co., Phila., Pa., Conslt. Engrs. (Previously noted.)

Md., Williamsport—Williamsport Power Co., office in Wingert Bldg., Hagerstown, Md., will construct power plant; steam operated; 18,000 K. W. initial capacity, later to be increased to 40,000 K. W.; cost about \$1,500,000. (Lately noted.)

Mo., Edina—North Missouri Power Co., Excelsior Springs, Mo., purchased plants of Edina Light Co., at Edina and Novinger, Mo.

Mo., Fulton—For full details see Water Works.

Mo., Holt—Holt Electric Light Co., capital \$5000, inceptd. by W. A. McGee, John A. Eby, Myrl M. Johnson.

Mo., Novinger—For full details See Mo., Edina.

Mo., Rich Hill—City engaged Arthur L. Mullergreb, Conslt. Engr., Kansas City, to prepare plans and specifications for power plant improvements; will soon call for bids; J. W. Vogel, Clerk.

N. C., Asheville—Carolina-Tennessee Power Co., E. B. Norvell, Secy., Murphy, N. C., will develop water power plant on Hiwassee River; construct 2 dams of 30,000 H. P. each.

N. C., Gatesville—Gatesville Light Co., capital \$10,000, inceptd. by O. C. Turner, C. M. Lawrence, W. J. Davis.

N. C., Kinston—Kennedy Memorial Home, Rev. Theo. B. Davis, Supt., planning construction of electric line from Kinston to the Home; 4 1/10 mi. carry 6500 volt lights and power for about a 4 horse-power engine, wood poles and cross arms.

N. C., Whiteville—City will install electric light plant and water works system; later plans installation of sewer system. Address The Mayor.

Okla., Muskogee—Oklahoma Gas & Electric Co., J. F. Owens, Gen. Mgr. will increase initial capacity of Bylesby electrical power plant east of Muskogee on Arkansas River from 10,000 H. P. to 30,000 H. P.; cost about \$3,000,000; to be in operation by August 1. (Previously noted.)

Tex., Corsicana—City and Chamber of Commerce interested in installing white way on Beaton and Eleventh Sts.

Tex., McLean—City will soon begin construction work on electric light plant; \$30,000 available. Address The Mayor. (Lately noted.)

Va., Norfolk—For full details see Mch. Wanted—Power Houses.

W. Va., Capon Springs—John S. Scully, Jr., Winchester, Va. will equip electric plant at summer resort.

Fertilizer Factories.

S. C., Clover—J. F. Pursley interested in establishing fertilizer plant.

Flour, Feed and Meal Mills.

Mo., Lamar—Lamar Milling Co., R. D. S. Bennett, Supt., will improve plant.

N. C., Shelby—Eagle Roller Mills, inceptd. by W. R. Hartness, W. J. Roberts, P. Maynard Washburn, capital \$100,000, will construct addition to plant, trebling size, increasing daily output to 500 bbls. flour.

Tenn., Memphis—Crown Rice Mill and Feed

OPPORTUNITIES FOR NEW BUSINESS

THROUGH THE

DAILY BULLETIN

Manufacturers or Machinery and Equipment, Dealers in Railroad and Contractors' Supplies, as well as Architects, Contractors and Builders, find it very profitable to follow up the advance news furnished through our DAILY BULLETIN EVERY BUSINESS DAY IN THE YEAR. It is an authoritative, prompt source of information concerning every industrial and railroad undertaking of any consequence, and likewise all important building operations and municipal improvements in the whole South. The opportunity of getting in correspondence with firms that are in the market is afforded by a daily perusal of its columns.

MANUFACTURERS RECORD

BALTIMORE, MD.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Co., will construct mill; 4 stories; frame construction; corrugated iron sides; cost \$100,000; T. Dickinson, supervising construction. (Lately noted).

Foundry and Machine Plants.

Mo., Bolivar—Gravel Loaders—Stiles Mfg. Co., Harry T. West, Prest.-Mgr., will erect 46x106-ft. building, tile brick blocks construction; install small foundry, steel lathe, drill, hack saw, and small blacksmith outfit, gang boring machine and cut-off saws; mfrs. loaders for loading gravel, sand, coal, etc.; let contract to Elmer Stiles, Aldrich, Mo., for woodwork and roofing; has plans. Lately noted. (See Mch'y. Wanted—Lathe (Steel)).

Mo., St. Louis—Castings—Semi-Steel Casting Co., capital \$15,000, inceptd. by J. H. Connor, C. F. Storekman, M. A. Jack.

N. C., Carthage—Machine Shop, etc.—Suggs Brothers, Tarboro, N. C. will erect 40x60-ft. machine shop, sheet iron construction, cement floor; equipment purchased; also plans establishing filling station.

N. C., Wilmington—Boiler Repairing, etc.—Broadfoot Iron Works, W. G. Broadfoot, Prest., has under construction 52x240-ft. building fabricated entirely of parts taken from steel ship, approx. cost \$200,000; plans also includes blacksmith shop, complete acetylene generating plant; rearranging railroad trackage, etc.; installing modern and complete equipment for repairs to boilers, locomotives, shops, general machine and welding work.

Gas and Oil Enterprises.

Ark., El Dorado—Lion Oil & Refining Co., Victor H. Smith, V.-P., 624 Finance Bldg., Kansas City, Mo., will expend about \$400,000 in plant buildings; construct 17 mi. of 2-in., 3-in., 4-in., pipe lines; increase capacity to 8000 bbls. daily; equipment \$400,000; opens construction bids Nov. 25; V. H. Smith, Engr., See Mch'y. Wanted—Refinery Equipment; Engineers (Construction).

Fla., St. Petersburg—City let contract for installation of gas pressure booster at gas plant. Address The Mayor.

Fla., Tampa—Imperial Oil Co., capital \$100,000, inceptd. with W. F. Miller, Prest.; A. Murray Allen, V. P.; B. L. Hammer, Secy.

Ga., Summerville—McLemore Cove Oil Co., offices at LaFayette, Ga., acquired and will develop approx. 10,000 acres of oil lands.

Ky., Catlettsburg—Cumberland Pipe Line Co. will construct oil receiving station in North Catlettsburg, build storage tanks, dock, etc.

Ky., Paducah—Stoutsman Oil Co., capital \$30,000, inceptd. by H. Preston Sights, Ben P. Niles, Page B. Blackmore.

La., Swartz—Atlas Oil Co. will rebuild gasoline extraction plant, burned at loss of \$100,000.

Md., Easton—Public Service Commsn. approved sale of Easton Gas Works to S. Harry Shannahan; will probably be operated as municipal plant. (Lately noted.)

Miss., Jackson—City will probably acquire gas plant of Jackson Public Service Co. Address The Mayor.

Okla., Bartlesville—Phillips Petroleum Co., purchased 2 gasoline absorption plants of Waite Phillips, Tulsa, will enlarge.

Okla., Chickasha—City will probably grant gas franchise to Wm. H. Riley & Co., Ardmore. Address O. Cottman, Mayor.

Okla., Henryetta—Eagle Pitcher Lead Co. and Black Petroleum Co., is installing 165 H. P. gas compressor in booster station for recovery of surplus gas from wells, forcing it into pipelines leading into smelter storage

tanks; cost \$25,000; Engr. De Foster, of Tulsa, Okla., in charge.

Okla., Pauls Valley—Chamber of Commerce and Texas & Pacific Coal & Oil Co., contemplate laying pipe line from Pauls Valley to Roberson field and installation of refinery.

Okla., Sapulpa—Oklahoma Gasoline and Oil Co., capital \$1,000,000, inceptd. by M. B. Downs, R. V. Rule, I. F. McGee.

Tex., Ft. Worth—Stine-Weatherly Oil Corp., capital \$5000, inceptd. by H. I. Stine, Al Weatherly, O. P. Turner.

Tex., Ranger—Chestnut Smith Corp., will expend approx. \$55,000 in improvements to plant; increase capacity 25 per cent.

Tex., San Antonio—Paulton Oil Co., capital \$48,800, inceptd. by W. C. Paulton, J. S. Trowbridge, Hermann Clemens.

Tex., Sherman—Buffalo Refining Co., capital \$75,000, inceptd. by F. M. Thompson, D. L. Socke, B. F. Smith.

Tex., Texas City—Terminal Oil & Refining Co., C. E. Robertson, Supt., will triple capacity of topping plant; construct 9 tanks of capacity ranging from 10,000 to 34,000 bbls.

Tex., Texas City—Swiftsure Petroleum Co. reported to construct two additional 55,000 bbl. storage tanks.

Tex., Texas City—United States Gasoline Corp will construct plant; 4 units; capacity of 100,000 gal. daily; cost of first unit \$250,000.

Tex., Tyler—Chamber of Commerce is negotiating with Bell & Arnold of Shreveport, La., for construction of gas pipe line.

W. Va., Fairmont—Clayco Gas Co., capital \$50,000, inceptd. by Charles Powell Kemble White, J. F. Hare.

W. Va., Huntington—Central States Oil & Gas Co., capital \$100,000, inceptd. by W. P. Floyd, L. C. Davidson, J. C. Sublett.

Ice and Cold-Storage Plants.

Ark., Fayetteville—Arkansas Cold Storage Co. will erect \$30,000 plant, increasing capacity to 25 tons; let contract to Moody Engineering Co., A. O. U. W. Bldg., Little Rock, Ark.

D C, Washington—Terminal Refrigerating & Warehousing Co let contract to Consolidated Engineering Co., Calvert Bldg., Baltimore, Md., to erect cold storage plant, containing nearly 6 acres floor space; reinforced concrete and steel construction; cost \$1,000,000.

Fla., Clermont—O. K. Ice Co., will erect 37x75-ft. ice plant, fireproof; concrete blocks construction with concrete floors, storage room capacity 25 tons; ice tank holding 192 of the 300 lbs. cans will have daily output of 15 tons; install 50 H. P. oil engine, etc.; estimated cost \$20,000; equipment all purchased. (Lately noted under Clermont Ice Factory.)

Ky., Paducah—Paducah Ice Co. let contract at \$63,000 to Geo. W. Katterjohn & Son, Paducah, for two factory units of ice plant; brick. (Lately noted.)

Md., Baltimore—Lexington Refrigeration & Storage Corp., chartered with J. F. Brinley, Prest.; American Bldg., Edwin C. Cover, V. P.; Charles O. Hall, Treas., to mechanically refrigerate Lexington Market.

S. C., Greenville—Newberry Stock Co., T. E. Kett, Prest., Newberry, S. C., interested in establishing \$100,000 refrigerator and cold storage plant at Camp Sevier.

Tenn., Greeneville—Greeneville Ice Co., John M. Kennedy, V. P., reported to erect additional buildings to increase ice and cold storage plants capacity; mch'y. all purchased.

Va., Charlottesville—Elliott Ice Co. (lately noted inceptd., capital \$50,000), organized with W. Dabney Harris, Secy.; purchased plant of Yancey Ice Co.

Iron and Steel Plants.

W. Va., Huntington—Huntington Iron Works, J. J. Reich, production Dept. will erect plant addition giving several thousand feet extra floor space, steel frame, mill type; equipped with traveling cranes and modern steel fabricating mch'y.; Robert L. and Sydney L. Day, Archts.

Land Developments.

Fla., Canton—Canton Co., capital \$5000, inceptd. with W. L. Gleason, Prest.; F. B. Gleason, V.-P.; C. Ivon Gleason, Secy.-Treas.

Fla., Center Hill—Mid Florida Farms & Mfg. Co., Geo. E. Stinhouse, Mgr., Leesburg, Fla. will construct new city in Sumter County; has 9000 acres of land; will construct water, sewer, lights, etc.

Fla., Jacksonville—Minter Homes Co., capital \$25,000, inceptd. with Chas. C. Ely, Jr., Prest.; H. P. Osborne, V. P.; W. B. Young, Secy.

Fla., Miami—City, Frank H. Wharton, Mgr. will improve Central City Park; construct buildings, etc.; cost of improvements exclusive of buildings, \$5000; work under supervision of James Doon of Exotic Gardens.

Fla., St. Petersburg—United Properties, capital \$5000, inceptd. with H. C. Bare, Prest.; H. W. Holland, V. P.; Lenore R. Bare, Secy.

Fla., Vero—Beachland Development Co. lately noted inceptd. with \$25,000 capital, organized with J. C. McCann, Pres.; J. M. Taylor, Secy.-Treas., will develop 100 acres on peninsula between Indian River and Atlantic Ocean.

Fla., West Palm Beach—Florida Growers, Inc., Carroll Dunscombe Stuart, Prest., and Model Land Co., J. B. McDonald, Prest., interested in development of 1000 acres on Military Trail in citrus and pineapples, will divide into 10-acre tracts.

Ga., Savannah—Tri-State Exposition, B. K. Hanafourde, Mgr., contemplates providing fair grounds for park, construct base ball grounds, tennis courts; erect exhibit buildings, etc.

Ky., Louisville—Brown Realty Co., capital \$500,000, inceptd. by J. G. Brown, Fred Forcht, P. P. Joyes.

Ky., Louisville—Al Ray Co., capital \$50,000, inceptd. by A. L. Ermine, Cornelia May Ray.

Md., Baltimore—Blenheim Realty Corp., 1219 Fidelity Bldg., capital \$30,000 inceptd. by Philip E. Lamb, Louis Farber, Warren A. Stewart.

Md., Baltimore—Allendale Construction Co., Windsor Mill Rd. and Allendale Ave., capital \$100,000, inceptd. by Wm. F. Bowling, Morris Caplan, Virgil R. Bowling.

Md., Baltimore—Silver Arrow Holding Co., 3000 N. Calvert St., capital \$5000, inceptd. by Wm. Lee Merriken, Earl F. Limbach, Parker C. Williams.

Md., Baltimore—Continental Land & Building Co., 146 Equitable Bldg., capital \$100,000, inceptd. by Jacob S. Hoffman, N. Waldo Harrison, Marcus A. Tregor.

Md., Baltimore—N. C. Sibley Co., Inc., 12 E. Lexington St., capital \$10,000, inceptd. by Newton C. Sibley, Donald Clark, W. Edward Bockmillert.

Md., Baltimore—Baltimore Realty Corp., 12 N. Paca St., capital \$100,000, inceptd. by Percy Williams, Leon Rosenbloom, Harry Rosenbloom.

Miss., Biloxi—North Biloxi Improvement

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Assn., J. D. Hagaman, Prest., Geo. Scarborough, Secy., will develop 100,000 acres for farming, stock raising, fruits and nuts. (Late-ly noted. (See Mch. Wanted—Farm Mch.; Tractors; Cotton Gln; Cane Mills; Barger Dredge; Rice Mills; Sugar Mills, etc.)

Miss., Biloxi—City will expend \$15,000 in improvements to Biloxi Golf Club.

Mo., Holden—City voted bonds for cemetery. Address The Mayor.

Mo., Kansas City—Berk's Investment Co. capital \$10,000, inceptd. by I. H. Hettlinger C. H. Hettlinger.

Mo., Kansas City—Kansas City Club, Geo. Muehlbach, Prest., will construct park, approx. cost \$250,000.

Mo., Kansas City—Rio Grande Sales Assn., capital \$10,000, inceptd. by F. W. Cornwall, R. D. Proffitt, Rudolph Hoehele.

Mo., Mansfield—A. J. Clark, Prest. Bank of Mansfield, and others acquired 20 acre tract, will develop for grape and strawberry culture.

Mo., St. Louis—Middleton Realty Co., capital \$98,000, inceptd. by Geo. P. Skouras, W. A. Stickney, C. H. Stemler.

Mo., St. Louis—Federal Home Building Corp., capital \$25,000, inceptd. by E. H. Paulus, David Beckett, J. H. Beck.

Mo., St. Louis—Hotfelder Realty & Building Co., capital \$10,000, inceptd. by A. J. Hotfelder, Conrad Paeben.

Mo., St. Louis—Mississippi Realty & Construction Co. inceptd. by W. A. Schlueter, J. S. Crubisich.

Mo., St. Louis—Guild Investment Co., capital \$24,000, inceptd. by Clyde Gary, J. L. Smythe, John H. Woerner.

Mo., St. Louis—Garden Realty Co., capital \$15,000, inceptd. by J. F. Schnitzer, C. A. Turner.

Mo., St. Louis—Cyrus Crane Willmore Organization, Inc. will develop Creveling tract for subdivision, construct streets, install water, sewer, etc.

Mo., St. Louis—Lindell Fair Grounds Co., Chas. C. Kunz, V.-P., purchased 10 acre tract; will subdivide.

Mo., Trenton—Grundy Land Co., inceptd. by W. E. Patterson, W. H. Shankin, G. M. Wolz.

N. C., Asheville—French Broad Realty Co., inceptd. with E. E. Reed, Dr. J. G. Anderson, Dr. A. T. Pritchard and others.

N. C., Beaufort—East Coast Land Co. has 30,000 acres of land will develop half of acreage by draining, building roads and bridges, dividing into small farms, construct 50 mi. of ditches, 10 ft. wide at bottom; B. M. Potter, Engr., cost \$150,000.

S. C., Columbia—Congaree Land Co., capital \$20,000, inceptd. with J. E. Belser, Prest.; E. B. Cantey, V. P.; T. J. Robertson, Secy.

S. C., Columbia—Holley Realty Co., capital \$25,000, inceptd. by Alen Smith, H. N. Edmunds.

S. C., Greenwood—Comms. of Public Works let contract to Geo. Burnap for park improvements for next 5 years; will develop park on 80 acres at city water and light plant, construct driveways, etc.

S. C., Murrells Inlet—Woodland Co., capital \$5400, inceptd. with H. M. McAllister, Prest., Lumberton, N. C.; J. M. Sprunt, Secy., Dillon, S. C.

Tex., Abilene—Cedar Hill Cemetery Assn., inceptd. by C. W. Roberts, D. S. Kauffman, F. G. D. Roberts.

Tex., Beaumont—Industrial Investment Co., capital \$100,000, inceptd. by J. R. Edmonds, H. A. McDonald, Bryan H. Kyger.

Tex., Dallas—Reliable Investment Co., capital \$20,000, inceptd. by Israele Cohen, I. D. Geetch, Aaron Kahn.

Tex., Port Arthur—City Park and Advisory Board approved plans for improvements to City Park and pleasure pier, incinerator, construction of storm sewer conduit to replace Sheveport Ave. ditch, construction of breakwaters and boat landing at pleasure pier; will probably vote on \$105,000 bonds.

Va., Newport News—S. W. Godwin & Co., Inc., inceptd. with S. W. Godwin, Prest.

Va., Roanoke—Scotland Corp., inceptd. with J. A. Jamison, Prest.; John C. Jamison, Secy.

W. Va., Fairmont—Sterling Heights Co., capital \$125,000, inceptd. by O. S. McKinney, H. L. Heintzelman, C. E. Smith; develop 70 acres for homesites; cost of improvements, \$30,000.

W. Va., Huntington—Federal Land & Investment Co., 910-3rd Ave., lately noted inceptd. with \$50,000 capital, organized with D. J. Pancake, Prest., Paul C. Pancake, V.-P.; E. C. James, Secy.; will develop Fairgrounds Addition; construct dwellings. (See Mch. Wanted—Building Materials.)

Lumber Manufacturing.

Ark., Pine Bluff—Long-Bell Lumber Co., of Missouri, \$30,000,000 merger of Arkansas Short Leaf Lumber Co., Longville, La.; Hudson River Lumber Co., Deridder, La.; Lufkin Land & Lumber Co., Lufkin, Tex.; Fidelity Lumber Co., Doucette, Tex.

Ark., St. Charles—White River Lumber Co., W. W. Keaton, Mgr. of logging operations moved headquarters from Clarendon, has contracts for 6,000,000 ft. timber.

Fla., Capps—Bishop Lumber Co., capital \$5000, inceptd. with W. B. Bishop, Prest.; W. H. Floyd, Secy.-Treas.

Ga., Louisville—T. B. Kelley Lumber Co. reported to install additional planing mill in plant, increasing output to 30,000 ft. per 24 hrs.

Miss., Edwards—Big Black Lumber Co., capital \$25,000, inceptd. by Ben and Thos. S. Marshall.

Okla., Mangum—Mangum Lumber Co., capital \$25,000, inceptd. by J. W. Lankford, Mangum; H. B. Alexander, Bridgeport, Tex.; Mrs. F. M. Chilson, McAlester, Okla.

Metal-Working Plants.

Fla., Miami—Instant Heat Device Co., capital \$500,000, inceptd. with W. A. Brown, Prest.; Victor R. Moffatt, Secy.-Treas.

Fla., Mount Dora—Mount Dora Publishing Co., capital \$15,000, inceptd. with W. E. MacWhorter, Prest.; Edith Edburn, Secy.

Md., Baltimore—Cans—American Can Co. will construct factory and service building at Boston and Hudson Sts.; 88x160 ft.; 4 story; brick; cost \$350,000; plans by C. J. Preis of New York, Engr.

Md., Baltimore—Gas Generators—Pen-Mardel Mfg. Co., 31 Franklin Bldg., inceptd. by J. Gould Levering, Raymond M. McAbee, Charles Ruzicka.

Mo., St. Louis—Middlewest Sheet Metal Co. inceptd. by Hermann Russ, W. B. Donnell, F. J. Blum.

Mo., St. Louis—Therapeutic Appliance Corp., chartered by William H. Lampe, James Cunningham and Gertrude J. Simon.

Mo., St. Louis—Rapid Scraper & Supply Co., inceptd. by W. M. Stringer, E. A. Macmahon and Charles E. Bryant; mfr. apparatus and supplies for scraping and cleaning any surface.

Mo., St. Louis—Automobile Springs—St. Louis Spring Co., acquired site at 3135 Wash-

ington Ave., started construction on plant for mfr. of all types of automobile springs.

Tex., Dallas—American Iron & Metal Co., capital \$50,000, inceptd. by Herman Cohen, R. H. Nathan, M. W. Townsend.

Mining.

Fla., Tampa—Hernando Hard Rock Co., capital \$50,000, inceptd. with J. M. Harvey, Prest.; Henry P. Harvey, Secy.-Treas.

N. C. Statesville—Crushed Stone—Alexander Granite & Land Co., J. W. Deaton, Prest., increased capital to \$250,000; has under development 250 acres; building 6 mi. railroad; leased to Hiddenite Crushed Stone Co., who will build plant; initial output 200 tons crushed stone daily, will increase to 750 tons; J. B. Roach, Engr.

Va., Roanoke—National Soap Stone Co., W. G. Jones, Prest., increased capital to \$250,000.

Va., Stuart—S. A. Thompson, and others interested in development of mica deposits; plan installing mica grinding mch. (See Mch. Wanted—Grinding (Mica) Machinery; Mica.)

Miscellaneous Construction.

Fla., Moss Bluff—For full detail see Mch. Wanted—Lock and Dam Construction.

Fla., Palatka—Dock, Warehouse, etc.—Chamber of Commerce, will submit to City Council, plans for municipal dock and warehouse, etc. as follows; 200x500-ft. pier, bulkheading with sheet steel piling, warehouse 80 x300-ft. on each side of pier with 3 fireproof walls making 6 stores; estimated cost \$150,000; J. H. Randolph, City Engr. (Lately noted.)

Fla., Tampa—Canal, etc.—A. W. Wade and N. C. Lykes, interested in construction of 20 ft. canal to be cut across lower bayshore peninsular to drain bayshore section between Howard Ave. and Ballast Point; approx. cost \$100,000.

Fla., Tampa—Seawall, etc.—Hillsborough County Comms., Charles T. Friend, Chrm., will construct 2½ mi. sea wall and fill, also approx. 100 mi. hard surfaced road; contemplate bond issue.

Ga., Macon—City and Dr. C. L. Ridley of Health Dept., interested in draining swamp lands around Macon; work to be accomplished in about 2 yrs. and to cost approx. \$38,000.

La., New Orleans—Facade—Port Comms., Suite 200 New Orleans Court Bldg., opened bids for construction of facade, laying of paving and coping walls at foot Canal St., Sadler Construction Co., Board of Trade Bldg., lowest bidder at \$58,077. (Lately noted.)

Md., Crisfield—Port Improvements—Crisfield Rotary Club interested in development and improvements for larger shipping facilities; surveys approved by Government.

Miss., Mayeraville—Levee—Mississippi Levee Comms., Greenville, Miss. For full details see Mch. Wanted—Levee Construction.

Mo., Kansas City—Grain Elevator—Missouri, Kansas & Texas Ry., F. Ringer, Chief Engr., St. Louis, Mo., let contract to James Stewart & Co., 30 Church St., New York to construct 10,000,000 bu. capacity grain elevator at Glen Parks Yard.

Mo., Mexico—Mausoleum—Churchill Construction Co., Bushnell, Ill. will erect mausoleum in Elmwood Cemetery, capacity 400 crypts; estimated cost \$120,000.

N. C., Beaufort—Drainage Ditches—For full details See Land Developments.

S. C., Charleston—Pier, etc.—Port Utilities Comsn., will rebuild pier at east end of Columbus street.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Tex., Austin—Grain Elevator—Quality Mills, capital \$150,000, inceptd., E. H. Perry, D. C. Reed and W. H. Dodson.

Tex., Coleman—Dam—City let contract to Tibbetts Construction Co., Fort Worth, Tex., at \$114,272 to build dam for a new lake.

Tex., Corpus Christi—Port Improvements—City and Nueces County Comms voted \$1,000,000 navigation district bonds; will improve wharfage and terminal facilities in connection with harbor project. (Lately noted.)

Tex., Electra—Spillway, etc.—City, John Houser, City Secy., construct concrete spillway in an earthen dam, involving 1700 cu. yds. excavation, 4000 sq. yds. wire mesh, 716 cu. yds. concrete; bids opened; Elrod Engineering Co., Consult. Engrs., 3206 Elm St., Dallas, Tex.

Tex., Port Arthur—Incinerator, Pleasure Pier, Breakwater—For full details see Land Developments.

Va., Norfolk—Dredging—City will let contract to Atlantic, Gulf & Pacific Co., 21 Park Row, New York City, for necessary dredging in connection with construction of proposed concrete aprons and marginal wharf at terminals, about 800,000 cu. yds. of dredging; \$150,000 appropriation. (Contract lately noted let to Raymond Concrete Pile Co. for construction of pier 1200 ft. long and 494 ft. wide, cost \$680,000.)

W. Va., Charleston—Incinerator—City, Incinerator Committee, let contract to Markman Engineering Co., Chicago, Ill., at \$55,550 to construct incinerator on present Estill St. site. (Supersedes recent item.)

Miscellaneous Enterprises.

Ala., Mobile—Mobile Truth Advertiser Publishing Co., Box 678, (lately noted inceptd., capital \$15,000) organized with J. F. Durham, Prest.-Mgr.; has established plant; install mchy. (See Machinery Wanted—Paper (Newsprint); Newspaper Plant; Linotype Machine, etc.)

D. C., Washington—Evening Star Newspaper Co., let contract to Turner Construction Co., 244 Madison Ave., New York to erect garage and paper warehouse; reinforced concrete construction, 5 stories; approx. floor space 12,000 sq. ft.

D. C., Washington—Tepper Construction Co., capital \$15,000, inceptd. by Isaac Tepper, Benjamin L. Tepper.

D. C., Washington—Lincoln Hotel Corp., capital \$1,000,000, inceptd. by Jerry C. Myers, Geo. A. Watson, both of Washington and Walter A. Johnson, Chevy Chase, Md.

Fla., Bartow—Florida Painting & Decorating Co., capital \$10,000, inceptd. with Harold L. Wilson, Prest.; T. W. Cannon, Secy.-Treas.

Fla., Ft. Myers—Office Supply Co., inceptd. with E. E. Ward, Prest.; Walter R. Kaune, Secy.-Treas.

Fla., Miami—Motion Pictures—John Brunton Production Co., capital \$50,000, inceptd. with John Brunton, Prest.; John M. Murrell, Secy.-Treas.

Fla., Orlando—State Building Co., capital \$500,000, inceptd. with Louis C. Massey, Prest.; L. L. Payne, Secy.-Treas.

Fla., Trilby—Bible Baptist Publishing Co., inceptd. with O. N. Williams, Prest.; E. L. Gillingtine, Secy.-Treas.

Fla., Umatilla—Construction—R. L. Collins and C. Z. Osborne, organized company for erection of houses, etc.

Fla., West Palm Beach—Palm Beach Motion Pictures, Inc., capital \$1,000,000, chartered with Addison Mizner, Prest.; John F. Roy, Secy.; Porte F. Quinn, Treas.; erect \$200,000 studio building.

Ga., Savannah—Contracting—Chapman-Clark Co., H. V. Chapman, Prest., 725 Wheaton St.; consolidation of McNab-Grimsley Co. and Chapman Clark Co.

Ky., Hazard—Virginia Supply Co., capital \$100,000, inceptd. by M. E. Brown, O. B. Noel and William Senter.

Ky., Louisville—Printing—Gibbs-Inman Co. J. D. Gibbs, Prest. will construct printing plant at Ninth and Jefferson Sts.; cost \$100,000.

Ky., Louisville—Louisville Studio Colony, increased capital to \$50,000.

Ky., Louisville—Hotels, etc.—Brown Realty Co., capital \$500,000, inceptd. with J. Graham Brown, Prest.

Md., Baltimore—Laundry—Archer's Laundry, Joseph Archer, Propr., Howard St., reported to have purchased site bounded by Eutaw, St. Mary and McCulloh Sts., erect plant.

Md., Baltimore—Seeds—Maryland Seed Co. 709 Calvert Bldg., inceptd. by Clifton S. Brown, W. Conwell Smith.

Md., Baltimore—National Building Specialties Co., 543 Calvert Bldg., capital \$50,000, inceptd. by John W. Archer, Charles von Mitzel and W. Albert Johnson.

Md., Baltimore—Donald Apartment Co., 5606 York road, capital \$35,000, inceptd. by George M. Lamb, Emil H. Funk and Herbert Walton.

Md., Baltimore—Federal Stevedoring Co., 24 Abell Bldg., capital \$50,000, inceptd. by Maurice B. Carlin, E. Peirce Smith, Chas. J. Wheeler.

Md., Baltimore—Independent Dairy Co., 537 S. Broadway, capital \$5000, inceptd. by Wm. Flehinger, Milton B. Kaufman, Simon Relief.

Md., Catonsville—Contracting—Reich Bros., Inc., chartered by Henry A., Jacob A. and August W. Reich.

Md., Cumberland—Vang Construction Co., increased capital to \$70,000.

Mo., Kansas City—E. & F. Cleaning & Dyeing Co., capital \$24,000, inceptd. by Joseph Erwin, W. A. Poster, Laura B. Flank.

Mo., St. Louis—St. Louis Hotel Supply Co., capital \$50,000, inceptd. by G. E. Briggs, C. K. Urquhart and M. S. Edmond.

Mo., St. Louis—Herkert Sales Corp., capital \$10,000; inceptd. by Theo. Herkert, Chas. E. Lane and A. S. Radcliff.

N. C., Asheville—Laundry—Mountain City Laundry, J. A. Ware and J. P. Weaver, Props., plan erecting \$50,000 laundry, purchased 200x170-ft. site on Cox St.; will remove machinery from old plant, also purchase additional equipment increasing plant's capacity; total cost about \$100,000.

S. C., North Charleston—Santee Towing & Lighterage Co., inceptd., with C. M. Whittitt, Prest.-Treas.; Frank T. Webb, Jr., Secy.

Tenn., Kingsport—Printing, etc.—Kingsport Press, Inc., L. M. Adams, Prest. purchased buildings having floor space of between 3½ and 4 acres, remodel for printing and binding plant; having initial capacity of 15,000 finished books daily, to be increased to 30,000; paper produced by Mead Fibre Co. will be used exclusively; approx. cost of enterprise \$1,000,000.

Tenn., Memphis—Mark F. Reardon & Co., capital \$25,000, inceptd. by Mary F. Reardon, Wm. H. McKinney, Jr., H. M. Cotton.

Tenn., Memphis—Amusement Park—John T. Willingham, Chrmn. of Park Comn., will construct all-year amusement park at fair grounds in connection with general plans for recreation center; acquired 26 acres land; Frank D. Fuller, Secy. Fair Assn.

Tex., Dallas—Oriental Dyeing & Cleaning Co., capital \$65,000, inceptd. by Otto Herold, Lang Wharton and J. S. Ownsby.

Tex., Ft. Worth—Printing—The World Co., 604 Commerce St., lately noted inceptd. with \$60,000, organized with Chester R. Bunker, Prest.; Frank R. Force, V.-P.; Harry Davis, Secy.; will install \$75,000 printing mchy.

Va., Petersburg—Southern Optical Co., capital \$10,000, inceptd. with Leon F. Rich, Prest.; Morris L. Baxter, Secy.-Treas.

W. Va., Logan—R. E. Matticks, Inc., capital \$50,000, chartered by R. E. Matticks, Bruce Corral and R. L. Todd.

W. Va., Montgomery—National Construction Co., capital \$10,000, inceptd. by L. B. O'Neal, A. J. Kincaid and B. E. Claypool.

W. Va., Princeton—Princeton Press Publishing Co., capital \$25,000, inceptd. by W. H. Wallingford, C. B. Hedrick, J. S. Bennett.

W. Va., Quinwood—Quinwood Hardware & Furniture Co., capital \$20,000; inceptd. by D. L. Burdette, C. L. McClung, both Quinwood; W. E. R. Byrne, Charleston, W. Va.

Miscellaneous Factories.

Ark., Springdale—Welch Grape Juice Co., Westfield, N. Y., will begin construction work on first unit of \$300,000 plant; J. H. Guinup, Supt. of construction.

Fla., Jacksonville—McLain-Coachman Co., capital \$100,000, inceptd. with E. E. McLain, Prest.; W. F. Coachman, Jr., V. P.; P. L. Gaskins, Secy.

Ga., Augusta—Hills Molasses Mixture Co., capital \$25,000, inceptd. by Leonard D. Dozier Hill, Thomas Barrett, Jr., Julian Barrett.

Ga., Macon—Calcium Arsenate—Chamber of Commerce interested in establishment of plant to mfr. calcium arsenate.

Ga., Savannah—Candy, etc.—Lee Roy Lovenstein Co., capital \$15,000, inceptd. by Lee Roy Lovenstein, Maier Utitz, Irving F. Meingard.

Ga., Thomasville—J. B. Jemison, B. H. Wright, Roscoe Fleetwood and others purchased plant of Southern Specialty Co.

Ky., Ashland—Betterton-Rupert Coffee Co., T. Lee Betterton, Prest., let contract for erection of 2 story addition to plant; Tyson & Foster, Archts., Ashland. (See Mchy. Wanted—Lumber, Framing and Flooring.)

Ky., Lexington—Lexington Battery Co. will rebuild plant burned at loss of \$75,000.

Md., Baltimore—Embroidery—Lion Bros. Co., Inc., 35 S. Poppleton St., increased capital to \$500,000.

Md., Baltimore—Hide, Tallow, etc.—Jacob W. Hook Co., 2700 Bank St., capital \$50,000, inceptd. by Edna Hook Requardt, C. Howard Hook, Howard R. Hook.

Md., Baltimore—Delux Comfort Shopping Bag Co., of America, 1714 W. Lexington St., capital \$30,000, inceptd. by Jack Thaw, Louis Barris, Samuel Deckelbaum.

Md., Baltimore—Toys—Canadusa Corp., 505 Sun Life Bldg., capital \$12,500, inceptd. with W. W. Moss, Prest.; J. P. Lauber, V.-P.; Hiram W. Woodward, Secy.; has contracts with Poole Engineering & Machine Co., Baltimore and Collier-Keyworth Co., Gardner, Mass. for mfr. of toys.

Miss., Como—Como Cero-Cola Bottling Co., capital \$6000, inceptd. by J. Gregory Johnson, W. P. Metcalf.

Miss., Greenville—Brooms—Chamber of Commerce, Herbert Stanley, Secy. interested in establishing broom factory, data on mchy. etc. (See Mchy. Wanted—Broom Machinery.)

Miss., Jackson—Capitol Remedy Co., Vicksburg, will establish plant at Jackson.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Miss., Tupelo—Creamery—F. H. Collins, Mgr., of Mississippi Creamery Co., will rebuild burned creamery.

Mo., Bolivar—Trousers—Bolivar Commercial Club will construct addition to plant of Obermann Mfg. Co.; install 45 machines, etc.

Mo., Kansas City—Isis Shoe Co., inceptd. by W. D. James, O. Jacobs, Jennie James.

Mo., Kansas City—Missouri Candy Co., capital \$5000, inceptd. by H. W. Haynes, Gust Triantos, S. D. Christos.

Mo., Springfield—Southwest Tanning Co., Mill St. and Glenstone Ave., will construct addition to plant now under construction, for drying stock and store rooms; cost of main building, not including addition \$10,000. (Lately noted.)

Mo., St. Louis—Hebeler Braid Co., capital \$7700, inceptd. by C. B. Otten, S. L. Mackey, M. L. Horty.

Mo., St. Louis—Benson Radio Co., capital \$10,000, inceptd. by L. E. Benson, G. E. Walker, C. W. Benson.

N. C., Charlotte—Velverine Corp., capital \$15,000, inceptd. by J. R. Brown, E. L. Propet, E. R. Price.

N. C., Kinston—Gravity Carbonating Co., increased capital to \$1,000,000.

Okla., Chelsea—Glass Bottling—Chamber of Commerce interested in establishing glass bottling plant and brick kiln.

Okla., Oklahoma City—Campbell Battery Co., inceptd. by Bert C. Campbell, E. E. Riley.

Okla., Tulsa—Shirts—Lehr Shirt Co., Albert M. Lehr, Jr., 223 Kennedy Bldg., will establish mfg. plant.

S. C., Sumter—Sumter Cigar Co., capital \$5000, inceptd. with H. B. Josey, Prest.; W. G. Moses, Secy. and Treas.

Tex., Houston—Castor Oil Products Co., capital \$15,000, inceptd. by D. K. Hodge, J. W. O'Brien, J. T. Scott, Jr.

Tex., Kenedy—Soap—E. L. Patillo will establish plant to mfr. laundry soap.

Tex., Lufkin—Eastex Syrup Corp., capital \$25,000, inceptd. by P. J. Dunne, D. A. Shaw, S. M. Monzingo.

Tex., Pasadena—Stauffer Chemical Co., Freeport, Tex., acquired 30 acres near Houston ship channel for sulphur refining plant.

Va., Graham—Bottling—Graham Three-C Nectar Corp., H. B. Forbes, Mgr., North Tazewell, Va., will improve plant.

Va., Richmond—Paper Products—Wortendyke Mfg. Co., has plan by Carneal & Johnson, Chamber of Commerce Bldg., for 3-story factory; cost \$200,000.

W. Va., Huntington—Midway City Glass Corp., capital \$50,000, inceptd. by B. W. Walton, N. Christian, R. T. Morris.

W. Va., Martinsburg—Vinegar—R. W. Koblegard of Washington, Prest. of National Fruit Products Co. contemplate increasing output of plants in Virginia and West Virginia to 4,000,000 gal. vinegar this season.

W. Va., Morgantown—Brooms—E. F. Bowlby of Bowly Mfg. Co., purchased and will enlarge plant of Biddle Broom Co.

W. Va., Wheeling—Interstate Oxygen Co., 4th St., let contract to H. L. Searight, Wheeling, for plant to mfg. commercial oxygen; 1 story; 100x150 ft.; cost \$55,000.

Motor Cars, Garages, Tires, Etc.

Ala., Mobile—Tires—Standard Tire Co., capital \$12,000, inceptd. with C. H. Denton, Prest.-Gen. Mgr.; Owen E. McEvoy, Secy.-Treas.; purchased tire department of Standard Motor Car Co.

Ark., Texarkana—Dreyer Motor Co. will occupy brick building cor. Broad and Elm St., erected by Ben Collins; contract let to Bryant & Brown at \$35,000.

Fla., Daytona—Automobiles—Green Brothers, capital \$150,000, inceptd. with S. B. Green, Prest.; M. J. Green, Secy.

Fla., Miami—Garage—Ryan & Knight let contract to E. H. Rand, Jr., at \$40,000 to erect 3 story building, steel, reinforced cement and brick construction; foundation begun.

Ky., Lexington—Star Garage and Transfer Co., change of name from Star Garage, increased capital.

Ky., Louisville—Bulk Sales Co., capital \$10,000, inceptd., by John P. Fleming, Allen B. Gwinn and D. E. Haag.

Md., Baltimore—Garage—Frederick E. Hesser let contract to E. Eyring & Son, 3501 Falt Ave. to erect fifty 1 story garages, brick construction, slag roofing C. Eads, Archt. (Lately noted.)

Md., Baltimore—Garage—Adam Kratz, 2208 Chelsea Terrace, will erect 1 story, 20x22-ft. garage, brick, asbestos shingles; construction by owner.

Md., Brooklyn—Arundel Garage, Inc., capital \$25,000, chartered by Felix H. Kostkowski, Baron E. and Carrie I. DeKalb.

Md., Rockville—Automobiles—Brosius Brothers & Gormley, Inc., capital \$30,000, chartered by James H. Gormley, Bernard T. and Edward R. Brosius.

Mo., Carthage—Filling Station—W. P. Ennis, will erect filling station at cor. 4th St. and Garrison Ave.

Mo., Excelsior Springs—Garage—B. C. Hedges, will erect garage; purchased site on St. Louis Ave.

Mo., Jefferson City—Garage—Cecil W. Thomas will erect garage building, purchased 130x80-ft. site on Broadway; plans being made.

Mo., St. Louis—Lovejoy-St. Louis Co., capital \$5000, inceptd. by Oscar B. Leighton, W. R. Davis, E. H. Stoll.

Mo., St. Louis—Carr Street Scale & Filling Station Co., capital \$5000, inceptd. by Wm. F. Hollman, Philip Stocks, D. O. Williams.

Mo., St. Louis—Automobiles—Emil Gaertner, Inc., capital \$15,000, inceptd. by James O. Dennis, Carl and Valle A. Gaertner.

N. C., Carthage—For full details see Foundry and Machine Plants.

N. C., Greensboro—Motor Truck Co., capital \$10,000, inceptd. by S. G. Rudd, J. A. Hedges will erect garage building; purchase Bangle and A. C. Goodwin.

Okla., Tulsa—C. A. Sanderson will erect garage at 117 S. Lansing St.; brick; cost \$10,000.

S. C., Columbia—Jacobs Overland Co., capital \$10,000, inceptd. with A. H. Wichman, Prest.; W. E. Jacobs, Secy.-Treas.

Texas, Dallas—United Auto Accessories & Lubricating Co., capital \$15,000, inceptd. by Myer Rabinowitz, George Mirsky and Homer Thompson.

Tex., Ft. Worth—A. P. Mitchell Auto Co., will construct garage on Calhoun St. between Fifth and Sixth Sts.; 2 story; fireproof; 100x200 ft.; 3 entrances; 40,000 sq. ft. of floor space.

Va., Danville—Leeland Motor Co., capital \$80,000, inceptd. with J. H. Dillard, Prest.; John W. Reagan, Secy.

Va., Galax—Galax Motor Co., inceptd. with O. B. Hackler, Prest.; W. E. Carrico, Secy., Monarat, Va., Secy.

W. Va., Wellsburg—Lauck Motor & Sales

Corp., capital \$25,000, chartered by J. W. Lauck and E. L. Thomas, both Wellsburg; E. M. Burke, Wheeling, W. Va.

Railway Shops, Terminals, Round-houses, Etc.

Ark., Texarkana—Texas & Pacific Ry., E. F. Mitchell, Chief Engr., Dallas, Tex., and Missouri Pacific R.R. Co., E. A. Hadley, Chief Engr., St. Louis, Mo. reported to erect jointly, reservoir to provide adequate water supply for the two companies; estimated cost of proposed improvements costing \$150,000.

Md., Crisfield—Pennsylvania R. R., W. G. Coughlin, Chief Engr., Philadelphia, Pa. reported to erect loading platform from foot of dock to 11th St., lay side tracks to reach the slip near Jersey bridge, increasing loading facilities at that point.

Okla., Healdton—Oklahoma, New Mexico & Pacific Railway, John Ringling's line, will, it is reported, build extension from Healdton to near Alma, 14 mi. in the Graham oil field. O. H. McCarty is V. P. and Gen. Mgr., at Ardmore, Okla.

Va., Norfolk—Pennsylvania R. R., W. G. Coughlin, Chief Engr., Phila., Pa., plans expending \$3,000,000 on Little Creek terminal project, improving both industrial and agricultural development; acquired 1000 acres including water rights ample for project; will construct deep water artificial harbor with artificial channel to bay, yards and track facilities to deliver cars to and from boats and barges; construct at St. Julian Ave. freight warehouse, team tracks, etc. to improve freight facilities; leased property of New York, Philadelphia and Norfolk R. R. Co.

Road and Street Construction.

Ala., Birmingham—City Comsn. let following contracts:

Pave 24th St., and 12th Ave., at \$14,040 and 32nd St. and 12th Ave., at \$1858.75 to Dunn Construction Co., Chamber of Commerce Bldg.

Pave McMillan Ave. at \$5383 and Wace and Princeton Aves., at \$1906.40 to Fromhold & Kessler; Eufaula Ave. and 23rd St. at \$4851 and 52nd St. and 6th Ave. south at \$5899 to J. F. Morgan Paving Co.

Ala., Columbiana—State Highway Dept., Montgomery, Ala., will receive bids Dec. 5 for 23 mi. concrete road in Shelby County, from Jefferson County line to Cecilton County line, being first link of road to connect Montgomery and Birmingham.

Ala., Mobile—City let contract to Hancock Bros. to pave seven streets in western part of city, cost for paving and storm sewers, \$80,000.

Ala., Tuscaloosa—City Comms. have plans for paving 22nd St. between Broad and 6th St. with cement concrete; W. E. Nichol, City Engr.

Ark., Fort Smith—City Comsn., Fagan Bourland, Mayor plans repaving 60,000 sq. yds. of streets, estimated cost \$125,000; soon consider bids; building road from Fort Smith to Fayetteville on day labor basis without contract; Sebastian County will soon let contract for 18 mi. shale road from Fort Smith to Greenwood, Government Aid Project; estimated cost from \$70,000 to \$80,000.

Florida—State Road Dept., will build 2 roads. For full details see Mch. Wanted—Road Construction.

Fla., Bushnell—Sumter County Comms., will build 10 roads; vote on \$84,000 bonds. (Lately noted.)

Fla., Center Hill—For full details see Land Developments.

Fla., Jacksonville—Duval County Comms.,

let contract to J. M. Jordan Co., at \$5970, for improving 1st Ave. from Neptune to Pablo.

Fla., Jacksonville—City Comsn., plans paving following streets:

Jefferson from Bay to Forsyth; Clay from Bay 135 ft. south; Adams from Fairfield to Parker; Cleveland from Kings road to Goether; all vitrified brick.

9th from Liberty to Walnut; concrete.

Laura from Duval to Orange; Julia from Adams to Eagle; Forsyth from Ocean to Washington; Duval from Hogan to Laura; Ashley from Main to Broad; to resurface old brick with 1½-in. asphalt.

Gilmore from Park to College; Herschel from King to Cherry; Cedar from Eagle to 3rd; Cedar from State to Eagle; Eagle from Julia to Cedar; King from Forbes to College; St. Johns Ave. from McDuff to Elizabeth; asphaltic concrete.

Union from Main to Ionia; relay brick on sand, with bituminous filled.

7th from Pearl to Boulevard; 4th from Market to Walnut; 9th from Main to Laura; Hubbard from 8th to 10th; Oak from King to James; James from St. Johns Ave. to Lydia; Walnut from 8th to 10th; Market from Seaboard Air Line north track to 17th St.; 10th from Main to Walnut; concrete with bituminous material; Thomas C. Imeson, Commr. of Highways.

Fla., Pensacola—State Highway Dept., Tallahassee, Fla., will receive bids until Nov. 10 for 10 mi. road from Pensacola to Roberts, on Pensacola-Flomaton road; Escambia County, Project No. 34; Wm. F. Cocke, State Highway Engr.; Winston E. Wheat, County Engr.

Fla., Tampa—Wm. E. Duncan, City Clerk, plans paving Rome ave.; 1700 sq. yds. 2½-in. asphalt blocks; reset 1200 lin. ft. concrete curb; Chas. H. Brown, Mayor, Commr.; bids opened Nov. 7.

Fla., Tampa—Hillsborough County Commrs. For full details See Mch. Wanted—Road Construction.

Fla., Tampa—Hillsborough County Commrs. Charles T. Friend, Chrmn., will build approx. 100 mi. hard surfaced road in connection with 2½ mi. seawall and fill; contemplate bond issue.

Fla., West Palm Beach—Palm Beach County Commrs., Hector Harris, Chrmn., let contract to Greynolds & Monroe, Inc., to resurface 3 mi. Boynton West road. (Lately noted.)

Fla., West Palm Beach—City plans widening and improving Atthea St. between Poinsettia and Olive Sts. Address The Mayor.

Ga., Columbus—Henry B. Crawford, City Mgr., approved plans for widening driveways on Broad St. from 12th to 15th.

Ga., Fairbanks—State Highway Dept., Atlanta, Ga., let contract to extend concrete highway from Fairburn to Coweta County line.

Ky., Mayfield—State Highway Comsn., Frankfort, Ky. plans building link of Ohio river road from Smithfield to Morgansfield, Graves County; contemplate bond issue.

Ky., Whitley City—State Highway Dept., Frankfort, Ky., plans building highway through McCreary County to Pulaski.

La., Harrisonburg—Cathoula Parish Police Jury, plans building 13.3 mi. Jonesville-Little River Highway; construct drainage structures; bids opened Nov. 20.

La., Monroe—City, plans paving Grand and DeSard Sts. Address The Mayor.

La., New Orleans—Louisiana Highway Comen., Baton Rouge, La., received bids for .86 mi. New Orleans-Pointe-a-la-Hache highway, around Poydras Crevasse, on loop,

St. Bernard Parish; Bres & Villers Co., New Orleans, La., low bidder. (Lately noted.)

Maryland—State Roads Comsn., 601 Garrett Bldg., Baltimore, Md., receive bids for following:

Allegany County—1.61 mi. State Highway from city limits of Cumberland toward Twigtown; low bidder, S. T. Brotemarkle, at \$76,712.

Anne Arundel County—1.04 mi. State Highway from Tracey's Corner to Nutwell; low bidder, Taylor & Truman, at \$14,545.

Montgomery County—1 mi. State Highway from Dawsonville toward Seneca; low bidder, Bester, Gosnell & Russell, at \$34,877.

Montgomery County—52 mi. State Highway from Prince Georges County line to Blair road; low bidder, Shyrook Rich, at \$16,498.

Montgomery County—1.03 mi. State Highway from Lee's Corner toward Bealsville; low bidder, Bester, Gosnell & Russell, at \$32,322.

Howard County—2.56 mi. State Highway from St. John's lane to Woodstock road; low bidder, Thomas, Bennett & Hunter, at \$70,913. (Lately noted.)

Md., Baltimore—City, Dept. of Public Improvements plans building 1 mi. 120-ft. boulevard connecting Govans with 33rd St. Blvd. east of Venable Stadium.

Md., Baltimore—Liberty Road Improvement Assn., B. John Black, Chrmn. Randallstown, Md., interested in improvements and widening of Liberty rd. from city limits to Harrisonville. Address State Highway Comsn., 601 Garrett Bldg.

Md., Baltimore—City let contracts for paving with sheet asphalt the following streets: To American Paving & Contracting Co., Montebello Ave., at \$43,649.48, Kenoak Ave. from Old Pimlico rd. to Hill Top rd. and Hill Top from Kenoak Ave. to South Ave.; Weber St. from Light to Williams St. and Glyndon Ave. from Bayard St. to Carey St. at \$34,521.30 to Apicella & Leonard, 224 Albermarle St.

Miss., Meridian—City plans paving 4th St. from 16th to 22nd Aves. Address The Mayor.

Missouri—State Highway Dept., Jefferson City, Mo., plans grading and constructing drainage structures on following:

Webster County, 3 mi. State road east and west through County; gravel pavement; State Project, Route 16, Sec. 35; H. P. Mobberly, Div. Engr., Woodruff Bldg., Jefferson City.

Clinton County, 5 mi. State road from Plattsburg to Kansas City; State Project, Route 33; N. R. Sack, Div. Engr., Ballinger Bldg., St. Joseph, Mo.

Gentry County, 2½ mi. State road from Stanberry to Albany; State Project, Route 4, Sec. 17.

Gentry County, 2½ mi. State road from Stanberry to Albany, State Project, Route 4, Sec. 18; N. R. Sack, Div. Engr., Ballinger Bldg., Joplin, Mo.

Clark County, 3 mi. State road from Wayland to Canton; State Project, Route 9, Sec. 7; Harry D. Griffith, Div. Engr., Hannibal, Mo.

Harrison County, 18-ft. asphaltic concrete surfacing; west of Bethany to township line; State Project, Route 4, Sec. 24; N. R. Sack, Div. Engr., Ballinger Bldg., Joplin, Mo.

Let contract to Cooper's Construction Co., at \$33,622.11, for 5 mi. State road from Centerville southward; Reynolds County, State Project, Route 21, Sec. 24.

Missouri—State Highway Dept., Jefferson City, Mo., plans grading and constructing drainage structures on following:

Newton County, 5 mi. State road from Neosho

to Arkansas State line; State Project Route 1, Sec. 106; Ray Dunlap, Div. Engr., Frieco Bldg., Joplin, Mo.

Howell County, 5 mi. State road southwest from Westplains; State Project, Route 80, Sec. 7.

Howell County, 5 mi. State road southwest of Westplains; State Project, Route 80, Sec. 8; J. H. Long, Div. Engr., Willow Springs, Mo.

Cole County, 4 mi. State road from Jefferson City to Eldon; gravel pavement; State Project, Route 15, Sec. 52; R. W. Hodson, Div. Engr., Jefferson City, Mo.

Laclede County, 5 mi. State road from Lebanon to Linn Creek; gravel pavement; State Project, Route 5, Sec. 73; H. P. Mobberly, Div. Engr., Woodruff Bldg., Springfield, Mo.

Platte County, 4 mi. State road from Kansas City to Parkville; State Project, Route 50, Sec. 6; A. C. Lingley, Div. Engr., Reliance Bldg., Kansas City, Mo.

Johnson County, 3 mi. State road south of Warrensburg; State Project, Route 13, Sec. 26.

Johnson County, 3 mi. State road south of Warrensburg, State Project, Route 13, Sec. 27.

Johnson County, 3 mi. State road south of Warrensburg, State Project, Route 13, Sec. 28.

Johnson County, 3 mi. State road south of Warrensburg, State Project, Route 13, Sec. 29.

Johnson County, 3 mi. State road south of Warrensburg, State Project, Route 13, Sec. 30; A. O. Lingley, Div. Engr., Reliance Bldg., Kansas City, Mo.

Montgomery County, 3 mi. State rd. from St. Louis to Kansas City, State Project, Route 2, Sec. 50; R. W. Hodson, Div. Engr., Jefferson City, Mo.

St. Charles County, 4 mi. State road from Kansas City to St. Louis, State Project, Route 2, Sec. 68.

St. Charles County, 4 mi. State road from Kansas City to St. Louis, State Project, Route 2, Sec. 69.

St. Charles County, 4 mi. State road from Kansas City to St. Louis, State Project, Route 2, Sec. 71; S. M. Rudder, Div. Engr., Bristol Bldg., Webster Groves, Mo.

St. Louis County, 5 mi. State road from St. Louis to Springfield, State Project, Route 14, Sec. 77.

St. Louis County, 5 mi. State road from St. Louis to Springfield, State Project, Route 14, Sec. 76; S. M. Rudder, Div. Engr., Bristol Bldg., Webster Groves, Mo.

Jefferson County, 4 mi. State road from St. Louis to St. Genevieve, State Project, Route 25, Sec. 3; S. M. Rudder, Div. Engr., Bristol Bldg., Webster Groves, Mo.

New Madrid County, 4 mi. State road from Malden to Risco, State Project, Route 82, Sec. 3; Frank B. Newton, Div. Engr., Sikeston, Mo.

Jackson County, 3½ mi. State road from Kansas City to St. Louis, State Project, Route 2, Sec. 3.

Jackson County, 2.75 mi. State road from Kansas City to St. Louis, State Project, Route 3, Sec. 5.

Jackson County, 3 mi. State road from Kansas City to St. Louis, State Project, Route 2, Sec. 5.

Jackson County, 3 mi. State road from Kansas City to St. Louis, State Project, Route 2, Sec. 6; A. O. Lingley, Div. Engr., Reliance Bldg., Kansas City, Mo.

Sullivan County, 5 mi. State road from Milan to Kirksville; State Project, Route 6, Sec. 33.

Sullivan County, 5 mi. State road from Milan to Kirksville; State Project, Route 6, Sec. 34.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Sullivan County, State road from Milan to Kirksville; State Project, Route 6, Sec. 35; A. R. Towse, Div. Engr., Howe Bldg., Macon, Mo.

Putnam County, 2 mi. State road from Unionville to Milan; gravel surfacing; State Project, Route 5, Sec. 3.

Putnam County, 2 mi. State road from Unionville to Milan; gravel surfacing; State Project, Route 5, Sec. 2; A. R. Towse, Div. Engr., Howe Bldg., Macon, Mo.

Atchison County, 5 mi. State road from Fairfax to Tarkio; State Project, Route 1, Sec. 7.

Atchison County, 2 mi. State road from Fairfax to Tarkio; State Project, Route 61, Sec. 4; N. R. Sack, Div. Engr., Ballinger Bldg., St. Joseph, Mo.

Macon County, 1.5 mi. State road south of Macon; State Project, Route 7, Sec. 21; A. R. Towse, Div. Engr., Howe Bldg., Macon, Mo.

Scotland County, 3 mi. State road from Memphis to Edina; gravel surfacing; State Project, Route 16, Sec. 4; Harry D. Griffith, Div. Engr., Hannibal, Mo.

Missouri—State Highway Dept., Jefferson City, Mo., let contracts for following:

Oregon County—4.931 mi. State road from Warrenton to St. Charles, excavating, constructing drainage structures, etc. Project Route 42, Sec. 4 to Will P. Plummer, Springfield, Mo., at \$32,931.

Polk County—4.94 mi. State road from St. Clair line south, gravel surfacing, grading, etc., State Project 13, Sec. 46, to M. E. Gillioz, Monett, Mo., at \$30,589.

Shannon County—4.78 mi. State road through Shannon east and west, gravel pavement, constructing culverts, etc., State Project Route 2, Sec. 60, to Cooper Construction Service Co., St. Louis, Mo.

Missouri—State Highway Dept., Jefferson City, Mo., let contracts for following:

Clay County, 10.60 mi. State road from Kansas City to Liberty; one course concrete pavement; Federal Aid Project No. 99; to American Paving Co., Omaha, Nebr., at \$315,195.90.

Davies County, 12.320 mi. State road from Gallatin southward and northeastward; State Aid Proj. No. 20,206; to Capitol Constr. Co., Des Moines, Ia., at \$38,538.71; grade and construct drainage structures. (Lately noted.)

Plans grading and constructing drainage structures on following:

Carter County, 4.489 mi. State road from Elsimore to Poplar Bluff; State Project Route 16, Sec. 74.

Carter County, 3.094 mi. State road from Carter County line to Elsimore; State Project, Route 16, Sec. 74; J. H. Long, Div. Engr., Willow Springs, Mo.

De Kalb County, 5 mi. State road north and south through County; State Project Route 31, Sec. 1; N. R. Sack, Div. Engr., Ballinger Bldg., St. Joseph, Mo.

Linn County, State road north and south through County; 18-ft. bituminous macadam surfacing; State Project, Route 5, Sec. 15; C. P. Owens, Div. Engr., Howe Bldg., Macon, Mo.

Perry County, 4.606 mi. State road on Kings Highway; gravel surfacing; State Project, Route 25, Sec. 12; S. M. Rudder, Div. Engr., Bristol Bldg., Webster Grove, Mo.

Ray County, 4.991 mi. State road from Excelsior Springs to Carroll County line; State Project, Route 10, Sec. 14; A. C. Lingley, Div. Engr., Reliance Bldg., Kansas City, Mo.

St. Genevieve County, State road through County; gravel surfacing; State Project, Route 25, Sec. 5; S. M. Rudder, Div. Engr., Bristol Bldg., Webster Grove, Mo.

St. Louis County, 2.244 mi. State road from St. Louis to Springfield; concrete surfacing;

State Project, Route 14, Sec. 77; S. M. Rudder, Div. Engr., Bristol Bldg., Webster Grove, Mo.

Wright County, 1.279 mi. State road from Hartsville to Mansfield; gravel surfacing; State Project, Route 5, Sec. 86; J. H. Long, Div. Engr., Willow Springs, Mo.

Mo., Bethany—City let contract to Wilson & Wilson, Bethany, to pave 15th St. Address The Mayor.

Mo., Fulton—State Highway Dept., Jefferson City, Mo., let contract to A. F. Brown, Jefferson City, at \$11,800 for 1 mi. State road on Old Trails Highway, near Fulton. (Lately noted.)

Mo., St. Louis—For full details see Land Developments.

Mo., New Madrid—State Highway Dept., Jefferson City, Mo., will expend \$50,000 to hard surface portion of Malden-Risco road, first portion of road to be improved; soon ask bids.

North Carolina—State Highway Dept., Raleigh, N. C., plans following projects: 105-C, Beaufort County, 15 mi. from end of No. 105B to Pantago, route No. 91.

105-D, Beaufort County, 7 mi. from end No. 105A to Leechville, route No. 91.

111-Camden County, 7.5 mi. from Camden to Currituck County line, route No. 34.

117—Currituck County, 17 mi. from Camden County line to Virginia State line, route No. 34.

118—Currituck County, 3.4 mi. from Sligo to Currituck Court House, route No. 344.

119—Currituck County, 29.9 mi. from Currituck Court House to Point Harbor, route No. 345.

122—Dare County, 9 mi. from Manteo to Davis Landing.

136—Halifax County, 10 mi. from Roanoke Junction to Littleton, route No. 48.

142—Halifax County, 8 mi. from Halifax to Weldon, route No. 40.

143—Halifax County, 2 mi. from Weldon to Roanoke River, route No. 40.

144—Halifax County, 18 mi. from Scotland Neck on route No. 12 to intersection with route No. 40.

169—Northampton County, 12.4 mi. from canoe Rapids to Virginia line, route No. 40.

189—Pitt County, 4 mi. from Farmville to Greene County line, route No. 91.

229—Greene County, 5 mi. from Snow Hill toward Goldsboro, route No. 103.

230—Greene County, 5 mi. from Snow Hill toward Farmville, route No. 12.

329—Columbus County, 14.35 mi. from Brunswick County line to Bolton.

393—Robeson County, 9.7 mi. from end of No. 392 to Lumberton, route No. 211.

943—Haywood County, 11 mi. from Waynesville to Canton, route No. 10.

N. C., Beaufort—For full details See Land Developments.

N. C., Burnsville—Town Comms. For full details see Machinery Wanted—Paving.

N. C., Durham—City let contract to A. B. Copenhaver, Ashboro, N. C., at \$27,000 to lay 15,000 sq. yds. sidewalks; S. P. Kueffner, Engr. (Bids lately noted.)

N. C., New Bern—City let contract to Eagle Engineering Co. to lay 3000 yds. concrete sidewalks.

N. C., High Point—City will pave N. Hamilton St. from Richardson to Williams St. Address The Mayor.

N. C., Thomasville—T. E. Jennings, Mayor, let contract to R. G. Lassiter Co., Raleigh, N. C., at \$84,000, for paving several streets, and laying additional sidewalks; 21,477 sq. yds. sheet asphalt pavement; 4263 sq. yds. sidewalks. (Lately noted.)

Okla., Duncan—City Comms., let contract to Western Paving Co., Oklahoma City, at \$61,691.47, to pave with asphaltic concrete, Paving Dists. Nos. 17, 19 and 20; Benham Engineering Co., Const. Engr., Kansas City, Mo.

Okla., Norman—Cleveland County plans improving dirt highway in County. Address County Comms.

Okla., Purcell—City plans 20,000 yds. additional pavement; Benham Engineering Co., Const. Engr., Kansas City, Mo.

Okla., Tulsa—City Comsn., let contract to Standard Paving Co., Tulsa, at \$31,441.03, to widen 7th St. from Detroit to Denver Sts.; H. E. Newblock, Mayor.

S. C., Abbeville—Abbeville County Highway Coman. For full details see Mch. Wanted—Road Construction.

S. C., Camden—Kershaw County Comms. contemplate building hard surfaced road from Camden to the Richland County line.

S. C., Columbia—Richland County Permanent Roads Comsn. opened bids for construction of 11 mi. of Monticello road, top soil or gravel; White Construction Co., Chatham, Va., at \$56,161, lowest bidder. (Bids lately noted.)

S. C., Columbia—City let contract to Powell Paving and Construction Co. to pave portion of Whaley St. from Main to Pulaski Sts., with sheet asphalt, embraces approx. 17,000 sq. yds.; W. S. Tomlinson, City Engr.

S. C., Greenville—Greenville County Supvrs. For full details see Mch. Wanted—Road Construction.

S. C., Greenville—For full details see Land Developments.

S. C., Jonesville—Union County Supvrs. Henry P. Smith, Chrmn., will receive bids until Nov. 9 for 3.657 mi. Sulphur Springs road in Bogansville Township; T. V. L. Fahnestock, Engr., West Springs, S. C.

S. C., Winnsboro—Fairfield County Comms. will build and improve county roads; contemplate \$500,000 bond issue.

S. C., Winnsboro—Town. For full details see Mch. Wanted—Paving and Sewer Construction.

Tenn., Athens—City let contract to P. M. Calloway & Co., at \$100,000 for street paving. Address The Mayor.

Tex., Austin—Travis County, Geo. S. Matthews, County Judge, let contract to Haden & Austin, Box 1223, Houston, Tex., at \$15,218.95, to surface 3.98 mi. State Highway No. 20-A; 1½-in. bituminous topping; inverted penetration. (Lately noted.)

Tex., Ballinger—City Comsn., let contract to J. B. Toomey, Fort Worth, Tex., at \$110,097.33 for 10 blocks vitrified brick pavement; Jas. E. Pirie, City Engr. (Lately noted.)

Tex., Benjamin—Knox County, plans grading and constructing drainage structures on 4.11 mi. Benjamin-Sagerton road; \$22,000; J. M. Morgan, County Judge, Benjamin; L. Noland, County Engr., Knox City, Tex.

Tex., Center—Shelby County plans grading 8 mi. road from Joaquin to Ashton, on Joaquin-Tenaha highway; bids opened Nov. 10; State Highway Comsn., granted \$28,078.38 federal aid.

Tex., Coleman—Coleman County, L. G. Matthews, County Judge, let contracts to grade and gravel surface following:

6.41 mi. Coleman-Baird road; to Scarborough & Davis, Gaston Bldg., Dallas, Tex., at \$26,113.15.

4.43 mi. Howe road; construct drainage structures; to Kuykendall & Shelton, Temple, Tex., at \$28,791.70.

17.31 mi. Santa Anna-Rockwood road; to Womack Construction Co., Sherman, Tex., at \$129,277.85.

Tex., Corsicana—Navarro County. For full details see Mch. Wanted—Road and Bridge Construction.

Tex., Edinburg—Hidalgo County will receive bids in about 30 days for 13.92 mi. State Highway No. 12, from Edinburg south through Pharr; bituminous macadam surfacing with concrete curbing or reinforced concrete; \$450,000 to \$650,000; Geo. P. Brown, County Judge; P. S. Devine, County Engr.

Tex., El Paso—Chas. Davis, Mayor, plans paving with Warrenite bitulithic, San Jose St. from Dakota to Louisiana, and from Elm to Piedras Sts.; also Sacramento St. from Louisiana to Dyer St.

Tex., Fort Worth—Tarrant County Commr., Court. Hugh L. Small County Judge, let contract to Tibbetts Construction Co., Fort Worth, at \$48,197 to grade and gravel Arlington-Mansfield road; to McCoy & Richards, Arlington, Tex., at \$8270 for drainage structures;

Will receive bids until Nov. 9 to grade, gravel and construct drainage structures on following:

5½ mi. Randol Mills road from Albright Bridge east to Randol Mills.

2½ mi. Wautaga—Old Denton road.

Tex., Fredericksburg—Chief Engr., U. S. Bureau of Public Roads, Washington, D. C., approved plans for widening gravel surfacing on State Highway No. 20-A in Gillespie County, between Fredericksburg and Blanco County line; \$18,194.30; A. F. Moursand, County Engr.

Tex., Georgetown—Williamson County. H. A. Hodges, County Auditor, let contract to Haden & Austin, Houston, Tex., at \$51,000, for 11.5 mi. Highway No. 2-C, from Georgetown to Travis County line; 1½-in. limestone base, inverted penetration. (Lately noted.)

Tex., Houston—O. F. Holcombe, Mayor, let contracts for paving following:

La Branch St. between Texas and Holman Aves., and Hawthorne St. between Audubon Place and Roseland Ave.; 42,453 sq. yds.; to Smith Bros., at \$140,025.40.

Kenwood Ave., between Montrose Blvd. and Mt. Vernon Ave.; Richmond Ave. between Graustark Ave. and Mandell Place; Yoakum Blvd., between Richmond and Westheimer Aves.; 35,850 sq. yds.; to Scott Shambaugh, at \$115,569.90.

Millam St., between Preston and Polk Aves.; Clark St., between Lorraine and Liberty Aves.; 21,900 sq. yds. brick pavement; to J. B. Toomey & Co., at \$98,182.

Chenevert St. between Pacific and Avondale Aves.; Brazos St. between Calhoun and Webster Aves.; 11,250 sq. yds.; \$49,670.

Walker Ave., between Crawford and Hutchins Sts.; 7150 sq. yds. concrete and granite pavement; to J. P. McDonald, at \$29,062.50.

Tex., Hobston—City Council let contracts for graveling following streets; Autrey, Montrose to Oak; Sycamore, Berthea to Bartlett, Hamilton, Dallas to Clay, Brazos, Bremond to Webster, Capital, Forest to Elmwood, Texas to Capitol, Eastwood, Garrow to Sherman, Maple, Jackson Hill to Olive, Olive north to Wood, 700 and 800 blocks of Omar, St. Charles, Capitol to Rusk, Hooker, Houston to Beauchamp, Wendell, Watson to 710 ft. east.

Tex., Jasper—Jasper County Commrs. C., Herbert Hargrove, County Judge, plans following:

Surface 6.5 mi. State Highway No. 8 from Hortons Switch to Sabine County line; gravel; \$51,600.

Surface 12.3 mi. State Highway No. 7, from point 8 mi. west of Jasper to Angelina County line; gravel; \$128,835; C. P. Hunter, County Engr.

Tex., Marlin—Falls County Commrs. For full details see Mch. Wanted—Road Construction.

Tex., McLean—City will soon begin construction work on streets; \$5000 available. Address The Mayor. (Lately noted.)

Tex., Meridian—Bosque County, W. A. York, County Judge, let contract at \$18,753.85, to surface 14.35 mi. Meridian Highway; 16,456 cu. yds. gravel surfacing; C. H. Van Eman, County Engr., Glen Rose, Tex.

Tex., Orange—Orange County, will build 6 roads. For full details see Mch. Wanted—Road Construction and Paving.

Tex., Palo Pinto—Palo Pinto County, E. L. Pitts, County Judge, let contract to Tibbetts Constr. Co., 209½ W. 8th St., Fort Worth, at \$6140.94, to grade and surface .65 mi. Parker St. (Lately noted.)

Tex., Pecos—U. S. Bureau of Public Roads, Washington, D. C., approved plans for 3.75 mi. State Highway No. 17-A; Reeves County, Federal Aid Project No. 320; \$22,865; J. R. Ross, County Judge, Pecos; A. D. Aacoco, County Engr., Balmorhea, Tex.

Tex., Pittsburg—Chief Engr., U. S. Bureau of Public Roads, Washington, D. C., approved plans for 16.66 mi. 16-ft. gravel bituminous road on State Highway No. 1-A, Camp County; Federal Aid Project No. 55; \$308,720; J. A. Elfrid, County Judge; Chas. C. Chappell, County Engr.

Tex., Richmond—U. S. Bureau of Public Roads, Washington, D. C., approved plans for 10.43 mi. 16-ft. gravel bituminous road on State Highway No. 19, from Harris County line to Brazoria County line; Fort Bend County, Federal Aid Project No. 318; \$150,000; C. D. Myers, County Judge; C. H. Kendall, County Engr.

Tex., San Angelo—Tom Green County, J. T. Mathison, County Judge, let contract to Julian C. Field & Co., Denison, Tex., at \$95,863.18, to surface 15.41 mi. State Highway No. 4; bituminous macadam; Gibb Gilchrist, Engr. (Lately noted.)

Tex., San Antonio—Ch. Engr., U. S. Bureau of Public Roads, Washington, D. C., approved plans to surface 8.38 mi. State Highway No. 2; macadam; Bexar County, Federal Aid Project No. 264; \$145,027.40; Augustus McCloskey, County Judge; R. E. Keeler, County Highway Engr.

Tex., Sinton—State Highway Dept., Austin, Tex., approved plans for surfacing 15.06 mi. State Highway No. 9, San Patricio County, from Portland to Road Dist. No. 1 line; 1-in. bituminous topping; \$107,600; J. C. Houts, County Judge, Sinton; A. C. Pancoast, County Engr., Beeville, Tex.

Tex., Terrell—Kaufman County, Terrell Road Dist., plans improving highways in Dist.; vote Nov. 14 on \$35,000 bonds; W. P. Williams, County Judge, Kaufman, Tex.; L. M. Ferlet, County Engr., Terrell.

Tex., Tyler—U. S. Bureau of Public Roads, Washington, D. C., approved plans for improving 7 mi. Chandler road; Smith County, Federal Aid Project No. 316; \$80,000; D. R. Pendleton, County Judge; D. K. Caldwell, County Engr.

Tex., Vernon—U. S. Bureau of Public Rds., Washington, D. C., approved plans for 11.12 mi. 18-ft. concrete paved road on State Highway No. 5 in Wilbarger County, Federal Aid Project No. 276; \$406,000; E. L. McHugh, County Judge; John B. Nabors, County Engr.

Virginia—State Highway Comsn., Richmond, Va., will build 3 roads. For full details see Mch. Wanted—Road Construction.

Va., Lynchburg—City let contract to F. D. Burnett & Co. to lay sidewalks on Euclid Ave.

Va., Richmond—Rotary Club interest in

completion of Rappahannock highway, propose City and State Highway Comsn. to divide cost of project.

W. Va., Williamson—Mingo County Commrs. and Logan County Commrs. For full details see Mch. Wanted—Grading and Drainage Construction.

Sewer Construction.

Ala., Mobile—For full details see Road and Street Construction.

D. C., Washington—For full details see Mch. Wanted—Sewer Construction.

Fla., Center Hill—For full details see Land Developments.

Ky., Louisville—For full details see Mch. Wanted—Sewer Construction.

Md., Baltimore—Board of Awards, Richard Gwinn, Register, City Hall, opened bids for terra cotta sewer pipe; Maryland Lime & Cement Co., lowest bidder at \$6085.12.

Mo., La Plata—For full details see Water Works.

Mo., St. Louis—For full details see Land Developments.

N. C., Gibsonville—City, J. T. Allen, Clk., is expending \$75,000 for sewer and water extensions; Tucker & Laxton, Contra. (Lately noted.)

N. C., Whiteville—For full details see Electric Light and Power Plants.

Okl., Chickasha—City, O. Cottman, Mayor, has plans for construction of lateral sewers in Districts Nos. 36 and 37; will soon call for bids.

Okl., Stroud—Board of Trustees of City will construct sewer and sewage disposal plant; vote Nov. 21 on \$40,000 bonds; Benham Engr. Co., Consol. Engrs., Gumbel Bldg., Kansas City, Mo.

Okl., Tulsa—City let contract to Dan A. Burton & Co., for sewer across 19th St.; also has estimates for storm sewer on Lewis St. from 12th to 11th Sts., cost \$24,001; will soon call for bids. Charles Schultz, Engr.

S. C., Winnsboro—For full details see Mch. Wanted—Paving and Sewer Construction.

Tenn., Athens—City let contract to P. M. Calloway, for constructing sewer.

Tex., Gainesville—City will construct sewer mains; voted bonds. Address The Mayor.

Tex., Harlingen—City, A. Tamm, Engr., has plans for sewer system, will soon call for bids; estimated cost of disposal plant, \$20,000, cost of sewer system, \$52,000. (Lately noted.)

Tex., Houston—City, O. F. Holcombe, Mayor, opened bids for sanitary sewer on Burkett, Chartres, St. Emanuel Sts., etc., Chas. K. Horton, lowest bidder at \$15,892.

Tex., Laredo—City will probably let contract to Jans Construction Co., at \$38,420.79 for sewer construction. (Lately noted.)

Tex., Port Arthur—For full details see Land Developments.

Va., Alexandria—City Council appropriated \$6000 for construction of sewer system on King St., also contemplates constructing sewer on Cedar St., cost \$10,000. (Lately noted.)

W. Va., Bluefield—City will install sewerage system. Address The Mayor.

W. Va., Charleston—City has plans and will soon let contract for sanitary sewer extension in Northview. Address The Mayor.

W. Va., Wayne and Kanawha Counties—For full details see Coal Mines and Coke Ovens.

Telephone Systems.

Mo., Rich Hill—Rich Hill Telephone Exchange purchased by R. B. Parker, Colorado Springs, Col.; will improve.

N. C., Greensboro—Greensboro Radio Club, William Boyst, plans establishing radio broadcasting station, with sending and receiving radiis of 1000 mi.

Tenn., Citico, P. O. Chattanooga—Western Union Telegraph Co., 198 Broadway, N. Y., let contract at \$250,000 to Webster & Stone Engineering Corp., 147 Milk St., Boston, Mass., to erect additional building used as general repair plant; reinforced steel and concrete construction; purchased 5 acres adjoining present plant.

Va., Roanoke—R. F. Dowdy of Roanoke Street Ry. and W. Graham Clayton will install complete radio receiving outfit at Catawba Sanatorium.

Textile Mills.

Ga., Rome—Cotton Duck and Specialties—McLia Cotton Mills, Julian Cumming, Prest. let contract to J. F. Dupre & Sons Co., Rome, for construction of building; 100x200 ft. concrete, steel and wood; cost \$30,000. (Lately noted.)

N. C., Monroe—Icemorlee Cotton Co., capital \$1,000,000, formed by merger of Iceman Knitting Mill, Icemorlee Cotton Mill and Everett Cotton Mill; A. J. Draper, Charlotte, N. C., Prest.; Charles Iceman, V.-P.; E. O. Fitzsimmons, Treas.

S. C., Greenville—Mills Mill, H. A. Lignon, Prest. let contract to Potter & Shackelford, at \$35,000 for construction of building; 4 story; brick; install 5000 additional spindles; will mfr. approx. 233,333 yds. cloth monthly; J. E. Sirrine & Co., Archt.

S. C., Greenville—Judson Mills, B. E. Greer, Prest.-Treas. considering increasing capital to \$2,000,000. (Lately noted having let contract to Gallivan Building Co. to construct addition to weave room.)

S. C., Laurens—W. L. Gray and others interested in establishing cotton mill.

S. C., Woodruff—Dr. H. A. Ligon and H. A. Ligon, Jr., and others of Spartanburg, S. C. purchased W. S. Gray Cotton Mills; will probably install looms for weaving.

Tex., Ft. Worth—Fort Worth Chamber of Commerce interested in establishing textile mill.

Tex., San Antonio—Cotton—Adams Cotton Mfg. Co., incptd. with J. H. Simon, Prest.; D. C. Giddings, V.-P. 10th of Brenham, Tex. to operate Lone Star Cotton Mills.

Va., Petersburg—Beveridge, Jones & Co., Atlanta, Ga. purchased the Pocahontas and Matoaca Cotton Mills; will equip Matoaca mill for mfr. of cord tires and equip Pocahontas mill for textile mfr.; install automatic looms, etc.

Water Works.

Ala., Birmingham—City, Wm. L. Harrison, Commr., will probably expend about \$23,013 for improvements and extensions to water works in North Birmingham; also expend about \$25,000 in extensions and improvements to electric light plant. (Lately noted.)

Ark.-Tex., Texarkana—Texarkana Water Corp., W. H. Roth, Phila., Pa., V.-P., contemplating expending \$170,000 in improvements and extensions to plant; construct dam and reservoir, etc.

D. C., Washington—Water Commrs., J. S. Garland, Supt., will construct 15,000 ft. of 20-in. water main from Chevy Chase Circle to Georgia Ave. by way of Rock Creek Park, and 6100 ft. of 20-in. water main in Georgia Ave. north of Military Rd., estimated cost \$133,000; pipe purchased, construction by

Water Dept. with day labor; DeLaval Steam Turbine Co., Trenton, N. J., has contract for furnishing and installing one 10,000,000 gal. centrifugal pumping unit at Water Dept. pumping station, cost \$29,900.

Fla., Center Hill—For full details see Land Developments.

Fla., St. Petersburg—City let contract at \$7300 to Layne & Bowler, Memphis, Tenn. for installing 2 electrically equipped wells at water works.

La., New Orleans—Z. D. Andrews of Alphonse Custodis Co., New York, will superintend construction of \$8000 chimney at water plant at Eagle and Birch Sts.; Thos Gowan, of Alaska Iron Works of Chicago, will install two 1000 H.P. steam boilers, cost \$228,915.

Miss., Bay St. Louis—For full details see Mch'y. Wanted—Water Works Improvements.

Mo., Fulton—Water and Light Committee, Hugo K. Graf and Leonard A. Day, of St. Louis, has plans for building for water and light plant to contain 3 electrical units and water pumping apparatus; bids for boiler house to be opened Nov. 22. (Lately noted.)

Mo., La Plata—City will construct water and sewer system, votes Nov. 21 on \$190,000 bonds. Address The Mayor.

Mo., Moberly—City will improve plant, install 3 pumps with capacity of 700 gals. a minute, construct additional mains, etc. Address The Mayor.

Mo., Sarcosle—City let contract to W. M. Edwards & Co., of Fulton, Mo., for drilling deep well for water works plant.

Mo., St. Louis—For full details see Land Developments.

N. C., Asheville—City Commrs. and City Planning Commn., engaged John R. Freeman Hydraulic Engr., Providence, R. I. for surveys for water improvements to city, contemplate construction of storage warehouse nr. Vance Gap to cost about \$15,000. (Lately noted.)

N. C., Forest City—City, H. G. Carrison, Mayor, let contract to Guion & Withers, Gastonia, for installing 500,000 gal. water treatment plant; Carolina Engineering Co., Engrs., Wilmington, N. C. (Lately noted.)

N. C., Gibsonville—For full details see Sewer Construction.

N. C., Whiteville—For full details see Electric Light and Power Plants.

Tex., Dallas—City, Water Commr. Appel, receives bids in about 14 days for concrete and steel water standpipe to be erected in Sunset Addition in Oak Cliff; 1,000,000 gal. capacity; cost about \$25,000. (Lately noted.)

Tex., El Paso—City, will construct dam in Mountain Park, 30 ft. high to impound lake of area of 6 or 7 acres; water to be pumped from river, 3000 ft. distant; P. E. French, Engr. for City Water Works, is designing plant to be constructed under direction of City Engr. (Lately noted.)

Tex., Houston—City, O. F. Holcombe, Mayor opened bids for construction of 8-in water main on Oakley St., Kreager-Haynes Construction Co., lowest bidder at \$1154.90.

Tex., McLean—City will soon begin construction work on water works; \$39,000 available. Address The Mayor. (Lately noted.)

Va., Radford—Dept. of Public Utilities, C. H. Tyler, Supt. will extend water system; about 10,000 ft. of 4 and 6 in. cast iron main; install pump, 2 stage, 350 g.p.m., 320 ft. head, electric drive, 2 phase, 60 cycle, 220 volt; 1000 % service meters; cost \$35,000.

Woodworking Plant.

Mo., Carthage—Carthage Casket Co., organized by Ed. Almer, Carthage; G. H. Connelly, Springfield, Mo., and Jay Nelson,

Tulsa, Okla., purchased plant of James Ross Sash and Door Co., N. Main St., will mfr. caskets.

Mo., Carthage—Caskets—G. H. Connelly, of Springfield, Mo., Jay Nelson of Tulsa, Okla., Ed. Elmer of Carthage, interested in establishing casket plant.

Mo., Kansas City—Windmills, etc.—Aermotor Co., capital \$35,000, incptd. by LaVerne W. Noyles, Henry Thompson.

W. Va., Guyandotte, P. O. Huntington, Nightrack Mfg. Co., Thomas W. Harvey, Prest., will erect 3-story, 40x120-ft. brick plant on Buffington St., plans for first unit now being made; daily capacity 200 racks.

Fire Damage.

Ala., Evergreen—Baptist Orphanage; loss \$10,000.

Ala., Flomala—Gulf Refining Co.'s warehouse Ala., Haleyville—Haleyville Oil & Fertilizer Co.'s gin; loss about \$10,000.

Ala., Troy—Levi Powell's gin.

Ark., Bay—J. W. Kitterman & Son's building; loss \$30,000.

Ark., Blytheville—Blytheville Gin Co.'s plant.

Ark., Blytheville—Phoenix Cotton Oil Co.'s gin; loss \$10,000.

Ark., Booneville—O. C. Oliphant's 2 dwellings; also adjoining dwelling; loss about \$15,000.

Ark., Earle—J. C. Borum's cotton gin and seedhouse; loss \$12,000.

Ark., Hope—Temple Cotton Oil Co.'s seed house on N. Hazel St., F. O. Collman, Mgr.

Ark., Monette—Charles Gibson's cotton gin; loss \$20,000.

Ark., Searcy—J. A. West's cotton gin; loss \$10,000.

Ark., Sheridan—Rhodes-Slaughter sawmill; loss not estimated.

Ark., Shiloh—School Building. Address School Board.

Fla., Graceville—Cowan & McGowan's store; A. B. Crutchfield's restaurant; Leroy Daniels' garage.

Ga., Millen—T. Z. Daniel's building occupied by Millen Grocery Co.

Ky., Jerico—R. S. Troxell's residence near Jerico.

Ky., Louisville—Abbott Lumber Co.'s yards on Ashbottom Rd.; loss not estimated.

Ky., Wingo—Edw. Dew's store; Masonic Home; Hardside Baptist Church (address The Pastor).

Md., Brooklyn—Dixon's Park at south end of Hanover St. Bridge, owned by John H. Gels & Co.

Md., Midland—Residences of John Tighe, Mrs. Rose Byrnes and Robert Hunt; Mrs. Mary A. Cunningham's residence damaged; loss \$15,000.

Miss., Belden—School building; loss \$10,000. Address School Board.

Miss., Moss Point—J. Bounds' building on Main St.

Miss., Scooba—Robinson & Shaff and A. A. Hamick's stores.

Mo., Campbell—McBride Undertaking Co.'s building, and St. Louis Cotton Gin Co.'s plant; loss \$85,000.

Mo., Columbia—Sigma Phi Epsilon Fraternity chapter house; loss \$10,000.

Mo., Kansas City—Kansas City Stock Yards Co.'s barns; loss \$30,000.

Mo., Linn—Osage County Courthouse. Address County Commrs.

Mo., Salisbury—Farmers' Grain Elevator; loss \$25,000.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Mo., St. Louis—Buckie Printers' Roller Co.'s building at 1445 N. 6th St.; loss not estimated.

N. C., Farmville—R. L. Davis and A. C. Monk's warehouse; loss \$20,000 to \$25,000.

N. C., North Wilkesboro—S. A. E. Phillips building.

Okl., Hitchcock—Consolidated School; loss \$50,000. Address School Board.

S. C., Anderson—J. B. McClure's gin.

S. C., Anderson—J. B. McClure's ginnery; loss \$5000.

S. C., Camden—Sumter County State Farm barns; J. P. Harling, Mgr.

S. C., Chester—Ruth Pryor's warehouse, 4 mi. west of Chester.

S. C., Florence—Hussey Building owned by S. Goodstein.

S. C., Fort Lawn—Thos. L. McFadden's store and warehouse.

S. C., York—J. B. York's gin house.

Tex., Cleveland—South Euclid School near Cleveland; loss \$50,000; Harry Adelzon, Pres., Board of Education.

Tex., El Paso—Odd Fellows Hall; Commercial Hotel; El Paso Hotel; Auto Supply Filling Station.

Tex., Galveston—Galveston Paper Co.'s plant; loss \$10,000.

Tex., Hillsboro—Thompson Building owned by W. V. Brassengame; loss \$10,000.

Tex., Holland—Oh Boy Theater; John Ashby's restaurant.

Tex., Ladonia—C. H. Wood & Co.'s cotton gin; loss \$50,000.

Tex., Palacios—Dr. A. E. Johns' residence; Claude Hotel owned by J. C. Chilton.

Tex., Terrell—Brin Bros.' store; loss \$70,000.

Tex., Vernon—J. A. Puckett's building occupied by A. T. Sanford.

Va., Norfolk—Fisheries Products Co.'s fertilizer plant at Money Point; loss \$300,000.

Va., Norfolk—H. Seelinger's restaurant, 111-13 Bank St.

Va., Petersburg—W. P. Atkinson's garage, C. E. Williamson's paint shop, etc.; loss \$10,000.

Va., Portsmouth—M. Hurwitz's store, 2500 County St.; Geo. Goodman's residence.

Va., Richmond—Southern Crockery Co.'s plant; loss \$25,000.

W. Va., Buckhannon—Belgrade Glass Co.'s plant; loss \$35,000.

W. Va., Fairmont—Chas. Meredith's building on Morgantown Ave.

W. Va., Mannington—Mrs. Ida Gallagher's dwelling in Sycamore Addition and store on ground floor; total loss \$15,000.

Damaged by Explosion.

La., Swartz—Atlas Oil Co.'s gasoline extraction plant; loss \$100,000.

Ky., Louisville—Preston Lodge, A. F. & A. M., will erect building; drawing plans.

La., Baton Rouge—Young Men's Christian Assn., S. K. Jones, 303 Roumain Bldg., will erect fireproof building; probably concrete with brick facing; 75x112 ft.; 4 stories; concrete floors; interior tile; rolling partitions; electric lights; W. F. Shattuck, Archt., 19 S. LaSalle St., Chicago.

La., New Orleans—New Orleans Lodge No. 30, B. P. O. E. will rebuild burned building, Elk Pl.; \$125,000; fireproof; auditorium, gymnasium, baths; 2 stories; 64x150 ft.; reinforced concrete floors and roof; pile foundations; low pressure steam heat; plumbing to consist of new work and remodeling; Rathbone E. DeBuys, Archt.; E. A. Christy, Asso. Archt. (Lately noted.)

La., Rayne—Arceneaux Post, American Legion, plans building.

N. C., Greensboro—Greensboro Council No. 13, J. O. U. A. M., R. T. Thomas, Trustee, purchased site on N. Davie and Church Sts., and will erect building; store on first floor.

Okl., Tulsa—Tulsa Benevolent Assn. will erect \$60,000 building, Main and Easton Sts.

Tex., Breckenridge—Lodge No. 244, I. O. O. F., will erect brick building, N. Breckenridge Ave.; 2 stories; C. E. Praeger, Archt.; bids opened Nov. 6. Address The Mayor.

Bank and Office.

Fla., Jacksonville—Jacksonville Branch, Federal Reserve Bank of Atlanta, J. C. Cooper, Chrmn., Board of Directors, receives bids until Nov. 24 for general contract, mechanical work, vault doors and equipment, and elevator for building, Hogan and Church Sts.; about \$200,000; 53x90 ft.; 3 stories and basement; reinforced concrete; fireproof; tile roof; tile, marble, hardwood and cork floors; low pressure steam heat; plans, specifications and blanks from A. Ten Eyck Brown, Archt., Atlanta, and H. C. Dozier, Asso. Archt., Jacksonville. (Lately noted.)

Ky., Hickman—Bank of Hickman will rebuild structure lately noted burned; probably brick or stone.

Tenn., Memphis—Stryker Kot-N-Wood Products Co. will erect \$10,000 office building, Oakland St. and Union Ry.; 1 story; brick veneer; temporary composition shingle roof; hot water heating plant in basement; Jas. L. Gatling, Archt.

W. Va., Charleston—Kanawha Valley Bank, John L. Dickinson, Vice-Prest., purchased part of old Capitol site and will erect bank and office building; brick and steel; \$1,600,000.

Churches.

Ark., Dumas—Methodist Church, Rev. W. P. Whaley, Presiding Elder, will erect \$30,000 building; construction begun.

Md., Baltimore—Baltimore Hebrew Congregation, Dr. Morris Lazaron, Rabbi, receives bids until Nov. 13 to erect gymnasium and swimming pool for Madison Avenue Temple, 1914 Madison Ave.; \$35,000 to \$40,000; 53x61 ft.; galleries; showers and locker rooms in basement; brick and stone; Louis Levi, Archt., Real Est. Trust Bldg., Philadelphia. (Lately noted.)

Miss., Baldwin—Presbyterian Church will erect brick building; about \$10,000; hot air heating plant and storage in basement; capacity 300; Walter R. Nelson, Archt., Memphis, Tenn.

Mo., Mexico—Presbyterian Church will erect \$30,000 Sunday school building. Address The Pastor.

Mo., St. Louis—Centenary Methodist Church, 16th and Pine Sts., Rev. Dr. C. W. Tablock, Pastor, purchased adjoining lot

BUILDING NEWS

BUILDINGS PROPOSED

Apartment Houses.

D. C., Washington—P. F. Gormley will erect \$450,000 building, 3945 Connecticut Ave.; 5 stories; brick and concrete; owner builds.

D. C., Washington—Victor Cahill purchased site in 1800 block Connecticut Ave. and will erect building.

D. C., Washington—L. E. Sullivan will erect building, 6th and Rhode Island Ave., N. W.; Milburn, Helster & Co., Archts., Union Savings Bank Bldg.; receiving bids.

Fla., Dunedin—Leslie N. Iredell, Tampa, is preparing plans for \$100,000 building; H. shape, 3 sections; 178x145 ft.; 2 stories; 32 apartments; hollow tile and stucco; green tile roof; construction to permit additional stories later.

Ky., Louisville—Harry Talamini, American Mosaic Tile Co., plans \$800,000 building, Third St. south of Broadway.

Md., Baltimore—Cleveland R. Bealmear, 501 Title Annex Bldg., will convert dwellings, 3121-27 W. North Ave., into apartments; 6 suites and 4 stores in front; \$25,000.

Mo., Kansas City—Phillips Building Co., 609 Victor Bldg.; two 3-story buildings, 1215-17 and 1219-21 E. Giffham Rd.; \$70,000; brick; mill construction; 65x45 ft.; oak floors; tar and gravel roofs; stone foundations; hollow fireproof and interior tile; freight elevator; 12 suites each; Nelle E. Peters, Archt., Victor Bldg.; owner builds; Leitner Bros., heating and plumbing; Wm. LaPierre, electrical work; construction begun.

N. C., Charlotte—Lee Kinney, Earl Whitton and others; \$70,000 building, E. 5th St. and Lamar Ave., Elizabeth Heights; 15 suites

of 4 and 5 rooms each; brick; Southeastern Construction Co., Contr.

N. C., Wilson—Mrs. L. W. Schultz will erect \$15,000 double apartment house, Bragg St.

Okl., Tulsa—F. B. DeShon will erect \$30,000 building, 1316 S. Carson St.; 3 stories; brick; 6 suites.

Va., Richmond—Davis Bros., Inc., J. Lee Davis, Pres., 2510 W. Main St., will erect three 2-family buildings, 2300 block Grove Ave., West End; \$30,000; 24x50 ft.; 2 stories; brick; L. Otis Splers, Archt., 2510 W. Main St.; owner builds; construction begun.

Va., Richmond—Willis Co., Mutual Bldg., will erect \$45,000 building, Monument Ave. and Franklin St.; 150x80 ft.; 36 suites; 3 stories; brick and stone; Lindner & Phillips, Archts., American Nat. Bank Bldg.; drawing plans.

Association and Fraternal.

Ala., Altoona—Ancient Free and Accepted Masons, Odd Fellows and Knights of Pythias will erect building; 2 stories; brick; stores on ground floor; site purchased.

D. C., Washington—Jappa Lodge No. 35, A. F. & A. M., S. W. Norton, 3912 8th St., N. W., will alter and erect addition to building, 2nd and Upshur Sts., N. W.; \$15,000; 2 to 3 stories; Clarke & Clarke, Archts., 1000 Virginia Ave., N. W.

Fla., Dunedin—Ancient Free and Accepted Masons will erect \$30,000 building; 2 stories; stores on first floor; Leslie N. Iredell, Archt., Tampa.

Ky., Louisville—Kosair Temple, A. F. & A. M., will erect building.

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and plans Sunday school and social building; stone and brick; gymnasium.

Mo., University (Sta. St. Louis)—First Church of Christ, Scientist, purchased site on Delmar Blvd. at entrance to University City, and plans building. Address The Reader.

Okla., Clinton—Baptist Building Comm., Dr. A. J. Jeter, and others, receives bids until Nov. 10 for construction and completion of basement, 9th and Frisco Sts.; plans and specifications at office Dr. Jeter.

S. C., Conway—Methodist Episcopal Church, A. C. Thompson, Chrmn. Bldg. Comm., will erect \$22,000 Sunday school building; stucco on brick; frame interior walls and floors; tile roof; steam heat; W. D. Harper, Archt., Florence.

Tenn., Memphis—St. Mary's P. E. Church plans to complete building; \$200,000; change name to Gallor Memorial Cathedral; Hanker & Cairns, Archts.

Tex., Fort Worth—Magnolia Ave. Christian Church, A. E. Chambers, Chrmn. Bldg. Comm., plans \$300,000 church and community center. Magnolia and Alston Aves.; 100x160 ft.; 4 stories; brick and concrete; auditorium to seat 3000, with 3 balconies of Sunday school rooms; gymnasium in basement; roof garden.

Tex., San Antonio—St. Patricks Church, Father Parnell, will rebuild church and rectory destroyed by fire, Van Ness & Willow Sts.; 2 stories; brick and concrete; Geo. Willis, Archt.; Moeller & Wellbacher, Contr. at \$10,690. (Lately noted.)

Va., Graham—Rev. A. S. Thorn is pastor of church planning \$75,000 building.

Va., Richmond—Sixth Mt. Zion Baptist Church, Rev. R. V. Peyton, Pastor, 809 N. St. James St., will erect \$100,000 building; 1 story and basement; brick and stone; C. T. Russell, Archt., Union University; revising plans.

City and County.

Fla., Jacksonville—Fire Station—City, W. A. Evans, Chrmn. City Comsn., will erect fire station No. 8, Stockton and Roselle Sts., Riverside; \$10,000; 30x50 ft.; interlocking tile; brick; tile roof; cement and wood floors; Holmes & Ehmann, Archts., 135 E. Bay St.; bids opened Nov. 9. Address Mr. Evans. (Previously noted.)

Fla., St. Petersburg—Armory and Market House—City, Mr. Zimmer, Mayor, will erect armory-market building; location not decided.

Ky., Paducah—Exposition Hall—City plans \$100,000 exposition hall. Address The Mayor.

Ky., Ludlow—Fire Station, etc.—City votes Nov. 7 on \$40,000 bonds for fire dept. and city buildings.

Md., Baltimore—Library—Enoch Pratt Library, Dr. Bernard C. Steiner, Librarian, Mulberry St. near Cathedral St.; will erect branch library in Irvington; \$20,000 appropriation available.

N. C., Smithfield—Home—Johnston County Comms., D. B. Oliver, Chrmn., Pine Level, will erect home near Smithfield; Benton & Benton, Archts., Wilson; bids opened Nov. 8.

Tex., Beaumont—Auditorium and Library—City, B. A. Steinhagen, Mayor, plans municipal auditorium and public library; \$250,000.

Tex., San Antonio—Clubhouse—City, O. B. Black, Mayor, will erect clubhouse for municipal golf course in Brackenridge Park; rustic cobble stone type; \$30,000; 40-ft. lounging room, 70 dressing rooms, 2 comfort stations, etc.; mosaic floors with wainscoting; Ralph H. Cameron, Archt.

Courthouses.

Okla., Hollis—Harmon County will erect \$100,000 courthouse; 3 stories; brick and stone; E. H. Eads, Archt., Chickasha.

Tex., Dalhart—Dallas County, A. M. Reese, County Judge, will erect courthouse and jail; \$150,000 bonds available; brick and concrete; 61x95 ft.; hardwood floors over concrete; 4 stories; gravel roof; concrete foundation; hollow fireproof tile; metal doors; vaults; vault lights; ventilators; ornamental terra cotta; Smith & Townes, Archts., Amarillo; C. D. Patterson, Supt., Dalhart. (Previously noted.)

Dwellings.

Ala., Birmingham—Mrs. Ruby Montgomery will erect \$14,000 dwelling, 209 Second St., S. W.

D. C., Washington—H. R. Howenstein, 1314 F St., N. W., will erect 15 dwellings, 3rd and L Sts., N. W.; 2 stories and basement; 20x35 ft.; brick; owner builds.

D. C., Washington—J. T. Thorne, care W. C. Nichol, Archt., Oxford Bldg., will erect 21 dwellings, northeast section; 2 stories and basement; 16x26 ft.; \$65,000.

D. C., Washington—D. J. Dunigan will erect 17 dwellings, 4200-32 3rd St., N. W.; \$70,000; 2 stories; brick; owner builds.

La., New Orleans—Standard Housing Construction Co. will erect 27 dwellings, Green and Pine, Green and Hickory, Hickory and Green, Lowerline and Burch, Lowerline and Pine, Audubon and Cohn, and Fontainebleau Dr. and Short Sts.; \$83,500; owner builds.

Md., Baltimore—Welsh Construction Co., 11 E. Fayette St., will erect 3 bungalows, S. W. cor. Wayne Ave. and Auburn Rd.; 1 story; frame; \$15,000.

Md., Baltimore—City Real Estate Co., 11 E. Fayette St., will erect 8 frame bungalows, S. W. cor. Edmondson and Swan Aves.; 26x31 ft.; \$25,000.

Md., Baltimore—James Keelty, 1123 Poplar Grove St., will erect 14 dwellings, 600-26 Grantley St., 2 stories; brick; 20x34 ft.; slag roofs; steam heat; \$28,000; F. E. Beall, Archt., 306 St. Paul St.; owner builds. (Lately noted.)

Md., Baltimore—W. Frost Moore, 207 W. Fayette St., will erect \$10,000 dwelling, Wickford Rd. near Overhill Rd. Guilford; 2½ stories; stone and tile.

Miss., Crystal Springs—W. T. Ellis and Mrs. J. G. Siebe will erect 12 cottages in Ellis Addition.

Mo., Kansas City—Fletcher Cowherd, Jr., will erect 4 dwellings, 6007-11-15-20 Oak St.; \$18,500.

Mo., St. Louis—L. B. Clemens, 3100 York Rd., will erect 2 dwellings, S. W. side Kenneth Sq. near York Rd.; 2½ stories; stone and frame; \$10,000.

N. C., Asheville—Grove Park Construction Co., W. R. Campbell, Prest., 14 Government St., inctpd. with \$100,000 capital and will erect number of dwellings in Grove Park; 4 under construction on Kimberly Rd. at cost of \$75,000.

N. C., Asheville—Roland A. Wilson, Prest., Tampa Box Co., Tampa, Fla., will erect 4 residences in Kenilworth; \$60,000.

N. C., Biltmore—Jake M. Chiles will erect \$20,000 to \$30,000 dwelling, Craggy Circle, Kenilworth; Ronald Greene, Archt., Oates Bldg., Asheville; also erect \$10,000 dwelling for slater.

N. C., Lexington—W. O. Burgin will erect dwelling, Third Ave., West.

N. C., Wilson—W. W. Graves plans \$40,000 to \$50,000 dwelling; Harry Barton, Archt., Greensboro.

Okla., Pawhuska—Dave Black will erect dwelling on Bartlesville Rd., 4 miles north of Pawhuska; Harry D. Joll, Archt., American Nat. Bank Bldg.; bids opened Nov. 8.

Tenn., Chattanooga—R. W. Barr, Vice-Prest., Chattanooga Savings Bank, purchased lot adjoining Deppen property and will erect dwelling.

Tenn., Chattanooga—T. R. Durham, Vice-Prest., Chattanooga Savings Bank, will erect dwelling on Fort Wood St.

Tenn., Memphis—Mrs. Edna Worthington will erect three \$5000 dwellings, 2229-2233-2239 Jefferson St.; heat \$500 each; 7 rooms; brick veneer.

Tenn., Nashville—Francis Hardison, Acklin Park, plans, \$17,000 dwelling; 2 stories; 16 rooms; brick veneer; C. K. Colley, Archt.

Tex., Austin—Edwin C. Kreisle, Scarbrough Bldg., is preparing plans for \$13,000 dwelling, West Ave.; 1 story; brick.

Tex., Austin—Carl Mayer will erect \$10,000 dwelling on Rio Grande St.; 1-story; brick veneer; E. C. Kreisle, Archt., Scarbrough Bldg.

Tex., Houston—Mrs. Jacob Hornberger; \$21,000 dwelling, Chenevert and McGowen Sts.; 20 rooms; brick veneer; Russell-Brown Co., Contr.

Tex., Houston—Hugh Wilkin will erect 2 dwellings on Bomar St. and dwelling and garage, Kipling St.; 5 rooms; \$3500 each.

Tex., San Antonio—Whitley & Carvel, Frost Nat. Bank Bldg., will erect number of dwellings on North Side; plans by Mr. Carvel.

Tex., San Antonio—H. J. Shearer will erect 6 dwellings in Brackenridge Parkway addition; 7 almost completed; 34 in all; \$5000 to \$10,000 each.

Tex., San Antonio—H. C. Thorman will erect 14 dwellings, Hammond Ave. near Walters St.; \$42,000; 5 dwellings, Drexel St. near Walters St.; \$12,500; \$2200 dwelling, Peck St. near Walters St.; all Highland Park; 5 rooms. (Lately noted to erect 111 dwellings.)

Tex., San Antonio—Arthur Muir will erect dwelling, Elizabeth Rd.; Adams & Adams, Archts.; W. C. Perry, low bidder at \$14,941.

Tex., San Antonio—Mrs. Wallace Rogers will erect 2-story stucco dwelling, Elsmere St. near Howard St.; Adams & Adams, Archts.; John Westerhoff, low bidder for tile at \$16,214.

Tex., San Antonio—Dr. Van Wie will erect addition to dwelling, Adams and Temple Sts.; Beverly W. Spillman, Archt.

Va., Petersburg—Robt. A. McKenney, Banking Tr. & Mortgage Co., will erect \$10,000 dwelling, Walnut Hill; 2 stories; 28x36 ft.; brick; F. A. Bishop, Archt., McIlvaine Bldg.; take new bids later.

Va., Richmond—Jos. H. Harrison, 207 E. Main St., will erect \$12,000 dwelling; 30x40 ft.; 2½ stories; wood and concrete floors; brick or stucco; slate roof; brick foundation; interior tile; G. Herbert French, Archt., 513 Times-Dispatch Bldg. (Lately noted.)

Va., Richmond—Lewis Kaufman will erect \$28,000 dwelling, 804 Westover Rd.; frame; 2 stories; 40x62 ft.; joist floors; tile roof; brick foundation; Otis K. Asbury, Archt.; owner builds; J. H. Rose & Co., hot water heating and plumbing; Catlett Elec. Co., electrical work; Fulton Brick Co., brick work. (Lately noted.)

Va., Richmond—Muhleman & Kayhoe will erect 5 dwellings, 2101-2109 Taylor St.; \$25,000.

000; brick and frame; also 2 brick dwellings, 105-107 S. Rowland St.; \$10,000.

W. Va., Sutton—Sutton Building Corp.; bungalow in North Sutton; W. F. Davis, Contr.

Government and State.

Ky., Greenup—Dwellings—U. S. Engr. Office, Milo P. Fox, Major, Corps of Engrs., receives bids until Dec. 7 to erect 5 lock-keepers' dwellings, at Dam No. 30 near Greenup; information on application.

Md., Baltimore—Memorial—Joint Building Comsn., Major E. Brooke Lee, Chrmn. State Memorial Comsn., and Col. Harry C. Jones, Chamber of Commerce Bldg., Chrmn., City Memorial Comsn., will erect Memorial Bldg. on square between Lexington, Gay, Fayette Sts. and Fallway; 189x107 ft.; Grecian-Doric architecture; limestone, Marvella or Georgia marble; six 39-ft. columns; main floor of stone; auditorium to seat 1600; Laurence Hall Fowler, Archt., 347 N. Charles Sts., Baltimore; Waddy B. Wood, Consulting Archt., 816 Connecticut Ave., N. W. Washington, D. C.; Consolidated Engineering Co., Calvert Bldg., Baltimore, low bidder at \$687,000; other low bids as follows: Henry A. Kries & Son, 6-8 W. Lombard St., heating and ventilating, \$40,182; Wm. Hellbach, 651 W. Baltimore St., plumbing, \$12,250; Blumenthal, Kahn Electric Co., 500 N. Eutaw St., electric installation, \$15,234. (Lately noted.)

Md., Edgewood—Officers' Quarters—Constructing Quartermaster, Edgewood Arsenal, Md., receives bids until Nov. 15 to erect 20 sets of officers' quarters, Edgewood Arsenal; plans and specifications from office Constr. Quartermaster.

Tex., Belton—Penitentiary—State Prison Relocation Board, State Land Commr. Robinson, Sec'y., Austin, plans to erect State Penitentiary in Bell County.

Hospitals, Sanitariums, Etc.

Ala., Albany—Benevolent Hospital, Geo. C. Hartung, Chrmn. Publicity Comm., plans \$50,000 W. M. Murray Maternity Wing.

Ala., Eufaula—Dr. P. P. Sauer purchased J. S. Winter home on Riverside Dr. and will erect additions and convert into hospital.

Ky., Louisville—St. Joseph's Infirmary plans building, Preston St. and Eastern Parkway.

Md., Sykesville—Springfield State Hospital, John M. Dennis, State Treas., Merchants & Manufacturers Bldg., Baltimore, will erect addition to accommodate 200 epileptics; \$200,000 available.

N. C., Statesville—Hinkel Hotel Co. will erect 60-room annex to Vance Hotel; 5 stories; 60 rooms; brick; rift pine floors; concrete foundation; Louis H. Asbury, Archt., Charlotte.

Tex., Fort Bliss—William Beaumont General Hospital, Lt.-Col. M. A. W. Shockey, Comdr., will expend \$50,000 on improvements.

Tex., Houston—Southern Pacific Hospital will erect \$30,000 nurses' home; 1 story and basement; fireproof; reinforced concrete, brick and tile; constructed to permit additional stories later.

W. Va., Huntington—Huntington State Hospital, Dr. L. V. Guthrie, Supt., will erect \$100,000 building, Spring Hill; accommodate 100 female defectives.

W. Va., Huntington—Huntington State Hospital, Dr. L. V. Guthrie, Supt., will erect \$100,000 building, Spring Hill; accommodate 100 female defectives; reinforced concrete; brick; tile shingle roof; fireproof composition floor; stone foundation; electric plant, 250 V., direct current; Richard Bates, Jr., Archt.

Hotels.

Ark., Little Rock—Marion Hotel Co., Herman Kahn, Prest., will erect 10-story hotel, 6th and Main Sts.; 100x300 ft.; 300 rooms; Mann & Stern, Archts., (C. S. Walz, Jackson, Tenn., lately noted promoting erection of hotel.)

N. C., Asheville—Jenkins Building; Jno. O'Neil, Mgr., Haywood St., will remodel structure and erect 20-room addition for Haywood Hotel; \$20,000; steam heat; Smith & Carrier, Archts. (Lately noted.)

N. C., Asheville—J. H. Marvel and others will expend \$600,000 for following developments in Kenilworth, remodel and equip Kenilworth Inn; \$300,000; Ronald Greene, will erect Arcade Building; \$25,000; erect Kenilworth Bank & Trust Bldg.; \$8000; brick garage to accommodate 75 automobiles; \$40,000; pave streets, laying water and sewer mains; \$50,000.

N. C., Asheville—Citizens Hotel Corp., will erect \$1,000,000 George Vanderbilt Hotel, Haywood and Vanderbilt Sts.; 9 stories; 78x170 ft.; fireproof; steel, granite, terra cotta and brick; 210 guest rooms with tile bath, built in tubs, showers; automatic fire alarm system; elevator shafts fire and smoke proof; staircases to have fireproof enclosures, fire doors, etc.; Wm. L. Stoddard, Archt., 9 E. 40th St., New York. (Lately noted.)

N. C., Rutherford—J. S. Lancaster, Virginia Shipp Hotel, Newton, will erect 25-room addition to Central Hotel.

Okla., Ponca City—J. M. Van Winkle and Henry Buckner, Jens-Marie Oil Co., will erect hotel; 3 stories; 50 guest rooms; first floor for stores.

Okla., Thomas—Commercial Hotel, Mrs. V. E. Messner, Propr., will erect 20-room hotel; frame; exterior of Kelly stone pebble dash; steam heat.

Va., Richmond—Virginian Hotel, Inc., J. T. Moll, will alter and erect addition to hotel, 8th and Church Sts.; 5 stories; 120x120 ft.; brick and concrete; Stanhope S. Johnson, Archt., People's Bank Bldg.

Miscellaneous.

Ga., Atlanta—Market—Massell Realty Co., will erect market building, Courtland St. and Warren Pl.; 20,000 sq. ft. space; E. C. Seiz, Archt.

Mo., St. Louis—Undertaking—William Stock Undertaking Co. will erect building on Grand Blvd. between Florissant and Carter Aves.; \$70,000; 50x130 ft.; foyers, parlors, retiring rooms and chapel to seat 350.

N. C., Barium Springs—Orphanage—Presbyterian Orphanage, Jos. B. Johnston, Gen. Mgr., will erect \$20,000 baby cottage; two \$25,000 boys' cottages; \$10,000 industrial building.

N. C., Charlotte—Orphanage—Thompson Orphanage, Rev. E. A. Osborne, Chrmn. Comm., will erect Sadie Tucker Williamson Infirmary; \$15,000; 2 stories; slate roof; Louis H. Asbury, Archt.

Va., Arno—Welfare—Stonagep Coke & Coal Co., R. E. Taggart, Gen. Mgr., Big Stone Gap, will erect \$20,000 welfare building; 1 story; plans by owner.

Va., Salem—Orphanage—Baptist Orphanage will erect \$30,000 cottage.

W. Va., Charleston—Clubhouse—Kanawha Country Club, Geo. D. Cochran, Prest., plans \$200,000 building; L. Lott, Archt., Weiffenbach Bldg., Dayton, O.

W. Va., Charleston—Clubhouse—Woman's Club Home Co., Mrs. H. D. Rummell, 1414 Kanawha St., plans to erect \$40,000 building.

Railway Stations, Sheds, Etc.

Fla., Lockhart—Seaboard Air Line R. R., W. D. Faucette, Ch. Engr., Norfolk, Va., will erect depot.

Fla., Orlando—Atlantic Coast Line R. R., J. E. Willoughby, Ch. Engr., Wilmington, N. C., will erect depot; brick.

S. C., Florence—American Railway Express Co. will erect \$35,000 express office and storage building.

Va., Norfolk—New York, Philadelphia & Norfolk R. R., W. G. Coughlin, Ch. Engr., Philadelphia, Pa., plans to erect freight station and warehouse at Little Creek; \$3,000,000.

Va., Rosslyn—Washington & Old Dominion Ry. Co., C. H. Livingston, Prest., 1218 Wisconsin Ave., N. W., Washington, D. C., will erect \$75,000 terminal and office building at Fort Key Bridge; 1 and 2 stories; brick and steel; plans by owner.

Schools.

Ala., Birmingham—Howard College, Dr. Jno. C. Dawson, Prest., 7918 Underwood Ave., will rebuild Crumpton Hall lately noted burned.

Ala., Ozark—Dale County Board of Education will erect high school.

D. C., Washington—District Commrs., Cuno H. Rudolph and others, 509 District Bldg., receive bids until Nov. 22 to erect 2 junior high schools; detailed information at Room 427, District Bldg.

Ga., Faceville—School Board will erect building to replace structure burned.

Ga., Macon—Jesuit Fathers plan to rebuild St. Stanislaus College; R. W. Hatcher, Mill-Edgeville, is interested.

La., Baton Rouge—Louisiana State University and A. & M. College, R. L. Himes, Secy., Bldg., Comm., will receive bids until Nov. 15 to erect brick cattle barn, brick warehouse and frame cottage; 1 story; plans and specifications at office Theo. C. Link, Archt., Box 587. (Lately noted to open bids Nov. 1)

La., Castor—Bienville Parish School Bd., Arcadia, plans to issue \$75,000 bonds to erect high school.

La., Gillis—Calcasieu Parish School Board, F. K. White, Secy., Lake Charles, will erect \$10,000 building in Dist. No. 19; bids opened Nov. 7; plans and specifications at office I. C. Carter, Archt., Lake Charles. (Lately noted.)

La., Harrisonburg—School Dist. No. 5 will vote Nov. 15 on \$75,000 bonds. Address Catahoula Parish School Board.

La., Hammond—School Board will erect \$100,000 high school; Sam Stone, Jr., Archt., 714 Union St.; E. A. Christy, Asso. Archt., both New Orleans. (Lately noted.)

Miss., Bovina—School Trustees plan to erect building near Log Store.

Miss., University—University of Mississippi will erect concrete stadium; 11 units 15 ft. long with 9 rows of seats; plans by owner.

Mo., Houston—School Board will erect \$20,000 building.

Mo., Kansas City—City voted \$5,000,000 bonds to erect buildings, repair present structures, etc. Address Board of Education.

Mo., Kirksville—Board of Education will erect junior high school; election Nov. 21 on \$100,000 bonds.

N. C., Asheville—St. Lawrence Catholic Church, Rev. Lolis Bour, Pastor, will erect parochial school; \$50,000; 3 stories; fireproof; Raphael Guastanino, Archt., New York.

N. C., East Bend—School Board will erect \$25,000 high school.

N. C., Kinston—School Trustees are considering election in December on \$300,000 bonds.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

N. C., Tryon—Board of Graded School Trustees, A. S. Hill, receives bids until Nov. 11 to erect graded and high school; \$45,000; 2 stories; brick; steam heat; 12 rooms and auditorium; plans and specifications at office Ronald Greene, Archt., Oates Bldg., Asheville. (Lately noted).

S. C., Olanta—School Board will erect \$25,000 building.

S. C., West Union—School Trustees will erect building; bids opened Nov. 1; plans and specifications at store of J. H. Alley.

Tex., Devine—School Board will erect \$15,000 auditorium; 1 story; 60x100 ft.; brick; tin roof; metal ceiling; wire glass; steel sash and trim; Ralph Cameron, Archt.; Devine Lumber Co., contr. for lumber. (Lately noted.)

Tex., Edinburg—School Trustees, T. M. Melden, Secy., will erect building in Sharyland Independent School Dist.; election Nov. 4 on \$45,000 bonds.

Tex., San Antonio—Board of Education will erect \$175,000 junior high school; reinforced concrete and brick; wood and composition floors; bids in about 30 days; Phelps & Dewees, Archts., Gunter Bldg.; W. E. Simpson Co., Engr. (Lately noted.)

Tex., Wichita Falls—City School Board, Lee Clark, Supt., will erect junior college.

Va., Newport News—School Trustees will erect high school, 31st St. and Huntington Ave.; 22x196 ft.; 3 stories; 27 classrooms, physical geography laboratory, biological laboratory, library, study hall, chemical laboratory, typewriting room, physics laboratory, drawing room, etc. (\$800,000 bonds previously noted voted.)

Va., Norfolk—School Board plans school in Villa Heights.

Va., Portsmouth—School Board, F. T. Briggs, Prest., Kira Bldg., will erect schools at Prentiss Pl. and on Glasgow St.; \$140,000 each; 3 stories; brick; Chas. M. Robinson, Archt., Times-Dispatch Bldg., Richmond.

Va., St. Paul—Wise County Board of Education, J. J. Kelly, Supt., Wise, receives bids until Nov. 15 to erect 14-room brick school; plans and specifications at office Mr. Kelly. (Lately noted.)

W. Va., Wayne—Wayne County High School Board, Fisher F. Scaggs, Secy., receives bids until Nov. 27 to erect high school; plans and specifications at office Holmboe & Pogue, Archts., Clarksburg, and office Mr. Scaggs.

Stores.

Ala., Florence—R. N. Harris will erect two 1-story brick buildings on New Court St.

Ala., Sylacauga—Hightower Bros., plan to erect 3 stores on Broadway between First and Second Sts.

D. C., Washington—Strobecker & Metzler, 203 Continental Trust Bldg., will erect \$40,000 building for stores and apartments; 2 stories and basement; 100x120 ft.; brick and stone; Lawrence P. Johnston, Archt., Davidson Bldg.

Fla., Tampa—W. C. Cook will erect \$30,000 to \$40,000 store and apartment; 2 stories; 11x87 ft.; brick walls, wood joist, 1 beams, etc.; composition roof; wood and tile floors; gas heaters; Leslie N. Iredell, Archt., Campbell Bldg.

Ga., Columbus—R. F. Dismukes plans building at First Ave. and 15th St.

La., New Orleans—S. J. Stewart, 527 St. Joseph Ct., will erect building to replace structure lately noted burned; hollow fireproof; tile; steel sash and trim; wire glass.

Md., Baltimore—E. T. Newell, 213 Courtland St., will erect \$20,000 store, 708 N.

Howard St.; 3 stories; 23x150 ft.; wood floors; brick foundations; slag roof; metal ceilings; steel sash and trim; Plaza Engineering Co., Archt.; owner builds.

Miss., Weston—Peets Bros. will erect store building.

Miss., Wesson—Louis Wallace will erect building for store, restaurant and market.

Mo., Kansas City—Bright Biscuit Co. will remodel building, 13th and Hickory Sts.; \$10,000.

Mo., Kansas City—A. Schumacher will erect \$10,000 building, 7022-24 Prospect Ave.; 2 stories.

Mo., Kansas City—Edw. S. Michelson will erect shop and office building at 3123 Troost Ave.; 2 stories and basement; 100 ft. frontage; fireproof; Wm. J. Koch, Archt.

Mo., Kansas City—Westmoreland Land & Investment Co. will erect business block, 75th St. and Broadway, Waldo; English design; brick and half timber; 8 stories on first floor; offices above; Fredk. H. Michaels and Albert B. Fuller, Asso. Archts.

Okla., Depew—Sumner & Gillette, Drumright, will erect store on Main St.; stone.

S. C., Greer—J. C. Cunningham will erect \$20,000 brick building on Trade St.

Tex., Huntsville—Gibbs Bros. & Co. will erect store, Main and Spring Sts.; 30x75 ft.; plate glass front; brick.

Tex., Wichita Falls—J. N. Prothro will erect building to be occupied by Wichita Falls Electric Co.; 2 stories; 50x150 ft.

Va., Lynchburg—C. N. Guggenheimer, 1029 Main St., will erect department store; 3 stories and basement; 75x32 ft.; brick, concrete and terra cotta; Stanhope S. Johnson, Archt., People's Bank Bldg.

Va., Richmond—Helen Miller will erect \$10,000 store; 1 story and basement; 26x68 ft.; brick and hollow tile; stone trim; wood joist floors and roof; C. E. Werking & Son, Archts., Palladium Bldg.

Va., Richmond—Kaufman Co. will erect \$18,500 brick store at 404-08 E. Grace St.

Theaters.

Ark., Eureka Springs—Herman Alwees will erect Commodore Theater, Spring St.; \$15,000; 85x35 ft.; seat 500.

Va., Chincoteague Island—Theater Corpn., L. W. Insley, Prest., W. Main St., Salisbury, Md., will have plans revised and soon call

for new bids to erect \$35,000 building for moving pictures, stores and offices; 2 stories and basement; 42x143 ft.; brick; Wilson E. Booth, Archt., 104 High St., Salisbury. (Lately noted.)

Warehouses.

Ala., Montgomery—N. J. Bell will erect building for Alabama Farm Bureau Federation.

Ark., Hope—Temple Cotton Oil Co., F. O. Collman, Mgr., will erect seed house to replace structure noted burned.

Fla., Jacksonville—N. E. Farris and N. G. Wade Investment will erect 2 brick warehouses on Enterprise St.; \$50,000.

Fla., Miami—City, F. H. Wharton, Mgr., will erect \$35,000 warehouse at city docks to be occupied by Clyde Steamship Co.; 80x400 ft.; 1 story; concrete floor; composition roof; H. H. Mundy, Archt.; C. W. Murray, Engr. (Lately noted.)

Fla., Palatka—Chamber of Commerce will submit to City Council plans for warehouse, 80x300 ft., on each of pier with 3 fireproof walls making 6 stores; Capt. J. H. Randolph, City Engr.

Ky., Somerset—R. J. McDaniels, Cumberland Grocery Co., will erect warehouse; 1 story and basement; 56x177 ft.; brick; owner builds.

La., New Orleans—Anthony April will erect warehouse; 42x151 ft.; 1 story; brick (alternate frame) and hollow fireproof tile; composition built up roof; concrete foundation; steel sash; wire glass; Burke & Dufrechou, Archts., 411 Balter Bldg.

La., New Orleans—Board of Port Commrs., 200 New Orleans Court House, receives bids until Nov. 16 to erect warehouse at foot of 7th St.; 120x500 ft.; steel with corrugated iron facing; also erect sacking plant for grain elevator.

La., New Orleans—Lukens Steel Co., Frank H. Gordon, Gen. Mgr., Coatesville, Pa., will erect several warehouses on Industrial Canal.

Miss., Wesson—Becker, Lyell, McGraht & Co. will erect warehouse on Spring St.

Miss., Wesson—Youngblood & Co. will erect warehouse on Factory St.

W. Va., Fairmont—Chas. Meredith will rebuild structure on Morgantown Ave. noted burned.

BUILDING CONTRACTS AWARDED

Apartment Houses.

Fla., Miami—Shenandoah Apts., Inc., C. H. Pfuntner, Prest., 16 Havlin Bldg., organized with \$100,000 capital and will erect concrete, pillar and beam building; 44x167 ft.; Edw. A. Nolan, Archt., 5 Havlin Bldg.; Commercial Realty & Constructive Co., Contr. Address Mr. Nolan.

Va., Bristol—Pritchett-Thomas Co., Nashville, Tenn.; Pennsylvania Court Apts., Pennsylvania Ave. and Taylor St.; \$75,000; 3 stories; fireproof; brick; hardwood and tile floors; steam heat; circulating hot water system; electric lights; 18 apartments; C. B. Kearfott, Archt.; S. V. Arnold, Asso. Archt.; both Bristol; James Construction Co., Contr., Johnson City, Tenn.

Association and Fraternal.

Ga., Savannah—Scottish Rite Masons, Carl Pfau, Chrmn., Bldg. Comm.; complete interior of Masonic Temple, including heating, plumbing, ventilating and electric systems;

Otis elevator; pipe organ; cork floor in Scottish Rite lodge room; terra cotta tile partitions; H. W. Witcover, Archt.; Artley Co., Contr.

Tenn., Memphis—Al Chymia Temple, Nobles of Mystic Shrine, Buford M. White, Potentate; \$523,000 office and club building; 14 stories; 50x150 ft.; brick; concrete floors and foundation; Jones & Furbringer, Archts.; Hanker & Cairns, Asso. Archts.; Kaucher, Hodges & Co., Contrs.; other contracts as follows; Fisher Heating Co., heating; Fowler Electric Co., electrical work; Pritchard Bros., plumbing; all Memphis; Otis Elevator Co., New York, elevators.

Va., Norfolk—Army & Navy Y. M. C. A.; \$35,000 annex, Tazewell and Boush Sts.; 5 stories on first floor, 60 sleeping rooms above; 106x102 ft.; wood and concrete floors; gravel roof; 2 stories; concrete foundation; ventilators; metal doors metal ceilings; Wm. Newton, Diehl, Archt.; Nugent-Price Constructors Corp., Contrs., 210 Tazewell St.; Hitt &

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Brown, electrical work; heating and plumbing not let.

Bank and Office.

D. C., Washington—Chamber of Commerce of United States, D. A. Skinner, Secy.; \$1,500,000 building; 150x156 ft.; irregular shape; 4 stories and basement; hollow tile arches, some concrete floors; flat and mission tile roof; concrete and steel grillage foundations; Cass Gilbert, Archt., 244 Madison Ave.; Gunvald Aus Co., Consulting Engr., 244 Madison Ave.; James Stewart & Co., Inc., Contrs., 30 Church St.; all New York; contract for furnishing and erecting steel work to American Bridge Co., 71 Broadway; limestone, Hoosier Cut Stone Co., 100 Park Ave.; hollow tile floor and roof arches, Comb Construction Co., Newman-Stern Bldg., Cleveland, O.; glass and glazing, Pittsburgh Plate Glass Co., Pittsburgh, Pa.; heating, lighting, plumbing and elevator not in general contract.

N. C., Charlotte—Geo. A. Smith, 14½ S. Church St.; add 1 story to present structure and erect 3-story addition in rear; to permit addition of 2 stories to new section and 1 story to old later; about \$20,000; steel, brick and reinforced concrete; 27x69 ft.; hardwood floors; composition roof; concrete foundation; steam heat; F. L. Bonfoey, Archt., 6 E. Trade St.; J. P. Hardy, Contr., E. 4th St.

Okla., Depew—Harry Kelly, Tulsa; \$36,000 office building; Doyle & Furry, Contrs. Muskegon.

Tenn., Knoxville—City National Bank, Floyd Haun, Cashr.; remodel and erect 3-story addition in rear; 60 ft. long; \$113,000; marble stairway to basement and marble interior trim; bronze wicket work and wall desks; hollow tile partitions; Hoggson Bros. Archts.-Contrs., 485 Fifth Ave., New York.

Va., Lynchburg—City, E. A. Beck, City Mgr.; remodel Friend's Warehouse for offices; \$20,000; Heard & Chesterman, Archts.; W. T. Jones, Contr.; steam heat not let.

Va., Richmond—Savings Bank of Richmond, L. Z. Morris, Prest.; \$52,930 building to replace burned structure, Main and 12th Sts.; Baskerville & Lambert, Archts.; W. L. Ragland & Sons, Contrs.

Churches.

Ga., Americus—First Methodist Church, Rev. Guyton Fisher, Pastor; \$150,000 building to replace burned structure; terrazzo, maple and concrete floors; brick and con-hollow fireproof and interior tile; vaults, ventilators; ornamental terra cotta; rolling partitions, steel sash and trim; wire glass; two-pipe, low pressure steam heat; Daniel & Beutell, Archts., Peters Bldg., Atlanta; E. W. Rawlings, Contr., Americus; heating, plumbing and electrical work not let.

N. C., Charlotte—First Baptist Church, Rev. Luther Little, Pastor; \$90,000 Sunday school building; 80x70 ft.; gray brick; wood and concrete floors; elevators; tile floor on roof garden; 4 stories; elevator; steam heat; city lights; J. M. McMichael, Archt.; John A. Gardner, Contr.

N. C., Tarboro—Calvary Church, Rev. R. E. Brown, Pastor, care Archt.; Cheshire Memorial Parish House; \$73,000; 2 stories; 180x50 ft.; wood floors; brick foundation; slate roof; steam heat, electric lighting and plumbing under general contract; Herbert Upjohn, Archt., Grand Central Terminal, New York; Hastings & Parsons, Contrs., Salisbury, Md.

Tenn., Nashville—Waverly Methodist Church; \$20,000 Sunday school building, Caruthers Ave. and 10th St.; 2 stories; brick veneer; J. B. Regen Co., Contr.

Dwellings.

Fla., Jacksonville—Dr. W. S. Manning; \$14,000 dwelling, St. Johns River near Mallory Pl.; 2 stories; brick; Leadlay Ogden, Contr.

Fla., Jacksonville—Mrs. E. V. Richeson; 2-story brick dwelling, Challen St. near Oak St.; about \$10,000; H. F. McAdam, Contr.

Fla., Palmetto—J. C. Courtney; \$30,000 dwelling, Lemon Ave. near Manatee River bridge; hollow tile and stucco; Spanish tile roof; T. W. Hullinger & Son, Contrs., Bradenton.

Fla., Seabreeze—Central Construction Co., C. C. Heisen, Prest., let contract for 3 bungalows, Wild Olive St., Jassamine Blvd. and Palmetto Ave., Ardmore addition; \$6500 to \$8000 each; Spanish Mission type; stucco; Spanish tile roof; construction begun; will let contract for 5 more soon.

Fla., West Palm Beach—M. Morgenthau; \$14,000 dwelling and garage, lot 58, Lake Dr., South Palm Beach; frame and stucco; 40x40 ft. and 18x30 ft.; Newton & Stephens, Contrs.

Ga., Macon—W. T. Anderson, Macon Telegraph Office; \$23,891 dwelling and garage, Shirley Hills; frame with pressed brick veneer; 53x45 ft.; 2 stories; slate and tin roof; brick and concrete foundation; hardwood floors; Curran R. Ellis, Archt.; Geo. B. Hale, Contr., 108 Napier Ave.; F. X. Daily, contr. for heating (hot water) and plumbing; building materials purchased; electrical work not let.

Md., Baltimore—John K. Eareckson, 814 N. Stricker St.; 3 frame bungalows, Glen Ave. and Cloverdale Road; 25x35 ft.; 1½ stories; steam heat; \$10,500; V. O. Eareckson, Archt.-Contr., 2956 Presman St.

Tenn., Memphis—O. P. Hurd; \$100,000 dwelling, East Parkway; south of Union St.; matt faced brick veneer; stone trim; ornamental wrought iron and cast stone; tile roof; 100-ft. frontage; solarium; Mahan & Broadwell, Archts.; Willis Hudson, Contr.

Tenn., Memphis—John E. McCall; \$22,000 dwelling, Central Ave. near Goodwyn St.; English type; stucco and stonekote; wood shingle roof; tile floors in sun parlor and entrance hall; 2 baths; garage; Jones & Furbinger, Archts.; Louis Diehl, Contr.

Tenn., Memphis—Dr. H. C. Schmeisser; \$20,000 dwelling, N. McLean Blvd. near Autumn Ave.; English Cotswold type; rubble stone, stucco and half timber; wood shingle roof; diamond paned windows; Mahan & Broadwell, Archts.; R. F. Howell, Contr.

Tex., Roxton—Dr. M. H. Maness let contract for \$36,000 dwelling; 2 stories; brick.

W. Va., Charleston—Robt. S. Spillman, Price, Smith, Spillman & Clay; native stone and stucco dwelling, Grosscup Dr.; 11 rooms and 5 baths; sleeping porches; double garage; Parker, Thomas & Rice, Archts., Union Trust Bldg., Baltimore; R. O. Newcomb, Contr., Charleston.

W. Va., Huntington—C. L. Cavendish, 830 Jefferson Ave.; \$10,000 dwelling, Jefferson Ave.; brick and frame; 38x34 ft.; 2 stories; slate roof; Robt. L. Day & Sidney L. Day, Archts.; M. W. Zinn, Contr., 8th Ave.

W. Va., Princeton—Stanley N. Smith; brick dwelling south of Princeton; Moore & Roach, Contrs.

Government and State.

Md., Baltimore—Death House—Board of Prison Control, Ogle Marbury, Prest., Fidelity Bldg.; remodel dormitory at State Penitentiary for death house and execution chamber; Theo. Wells Pietsch, Archt., American Bldg.; Lewis Construction Co., Equitable Bldg., Contr. at \$17,729.

Md., Edgewood—War Dept., Washington; 17 artillery stables; 30x140 ft.; gravel and clay floors; concrete foundations; prepared roofing over wood; \$25,000; bids desired for painting; Northeastern Construction Co., Contr., Lexington Bldg., Baltimore; Government supplies all materials.

Hospitals, Sanitariums, Etc.

Md., Baltimore—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C.; remodeling and extension of kitchen and mess building, etc., construction of new ward units Nos. 1 and 2, isolation ward and quarters for U. S. Marine Hospital; \$200,000; ward buildings, 1 story; basement, 30x150 ft.; brick; refrigeration plant; remodel and 2-boiler addition to heating plant; Northeastern Construction Co., Contr., Lexington Bldg., Baltimore; Noland Co., Newport News, Va., mechanical equipment.

Miss., Clarksdale—Hospital Comm., A. J. Simmons, Chrmn.; \$33,000 hospital; 2 stories; reinforced concrete and hollow tile; tile roof; hollow fireproof and interior tile; concrete floors; Chas. O. Pfeil, Archt.; Estes-Williams-Ragsdale Co., Contr.; both Memphis.

N. C., Morganton—Bldg. Comm., S. M. Robinson, Chrmn., Lowell; women's building and refrigerating plant at State Hospital; former, 2 stories and basement; dormitory rooms of 15 to 20 beds to accommodate 104; latter will be addition to present storage warehouse; equipped with refrigerating and ice making machinery; both structures fireproof; brick and concrete; outside finished in rough faced brick and limestone; Chas. C. Hook, Archt., 207 Trust Bldg., Charlotte; H. A. Underwood, Raleigh, Engr. for ice and cold storage building; Wiley & Wilson, Lynchburg, Engrs. for equipment; Hancock & Davis, Beaufort, Gen. Contrs., at \$108,000; other contracts include: refrigerating machinery, Baltimore Contracting & Supply Co., 757 Calvert Bldg., Baltimore; cork insulation, Armstrong Cork Co., Atlanta; heating, Grinnell Co., Charlotte.

Tex., Temple—Dr. J. M. Woodson; \$75,000 hospital, 3rd St. and Avenue G; 3 stories; brick; fireproof; 86x110 ft.; Milton W. Scott & Co., Archts., Waco; K. H. Muse, Contr., Fort Worth.

Hotels.

Fla., Fort Pierce—Fort Pierce Hotel Co.; 40-ft. addition to dining room of hotel and roof garden as second story; J. N. Sherwood, Archt., Fort Pierce and Miami; F. W. Tyler & Son, Contrs., Fort Pierce. (Previously noted.)

Tenn., Memphis—Tri State Hotel Co., Jno. T. Walsh, Prest.; \$1,500,000 hotel, Main and Adams Sts.; 14 stories and basement; 100x150 ft.; 358 rooms with bath, shower and running ice water; reinforced concrete and brick; stone trim; tile and composition roof; hollow fireproof and interior tile; metal doors, mail chutes; concrete floors; ornamental terra cotta; steel sash and trim; wire glass; Jones & Furbinger, Memphis, and Barnett, Haynes & Barnett, Century Bldg., St. Louis, Asso. Archts.; Gardner & Howe, Engrs., Memphis; James Alexander Constr. Co., Contr., 388 N. Front St.; Hughes Heating Co., heating Co., heating (steam); Dawkins Electric Co., electric work; Hull Plumbing Co., plumbing; Otis Elevator Co., elevators; all Memphis.

Miscellaneous.

Fla., Jacksonville—Sheds — Commodore's Point Terminal Co. will erect \$15,000 addition to 2 sheds on River St.; 1 story; frame; McGarvey Cline, Contr.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Railway Stations, Sheds, Etc.

S. C., Anderson—Piedmont & Northern Ry. E. Thomason, V.-P.-Gen. Mgr., Charlotte, N. C.; two-story; passenger station; \$50,000; brick and metal; J. E. Sirrine & Co., Architects; Jamison & Morris, Contrs., both Greensville, S. C.

Va., Richmond—Atlantic Coast Line R. R. Co., A. M. Griffin, Archt., Wilmington, N. C.; \$90,000 freight terminal; one story; 40x400 and 14x504 ft.; steel, hollow tile and concrete; asphalt floors; Johns-Manville built-up roof; concrete foundation; wire glass; ventilators; A. M. Walkup Co., Contr.

Schools.

Ala., Gadsden—City Board of Education; 6-room school; stucco; J. F. Edwards, Contr.

Ga., Dalton—Board of Education; \$49,000 high school; 2 stories and basement; brick; concrete and wood floors; concrete foundation; Barrett and tin roof; 11 classrooms, domestic science room, locker and shower room, music room, laboratory, auditorium to seat 500; J. J. Baldwin, Archt., Anderson, S. C.; L. J. Barrett, Contr., Kingston, Ga.

La., New Orleans—Orleans Parish School Board, Danl. J. Murphy, Prest.; \$249,936 school at St. Claude and Alder Sts.; 3 stories; 240x240 ft.; 30 rooms; fireproof; E. A. Christy, Archt.; O. M. Gwinn, Contr., Canal Commercial Bldg., also \$116,000 school at Broadway and Irma St.; E. A. Christy, Archt.; J. A. Petty, Contr., Godchaux Bldg.

La., Oakdale—Allen Parish School Board; Oberlin; \$88,000 building; 117x160 ft.; 2 stories and basement; brick; wood and concrete floors; concrete foundation; composition

roof; auditorium to seat 1300; I. C. Carter, Archt., Lake Charles; Jap. W. Hudson, Contr., Oakdale.

Miss., Gulfport—County Board of Education will erect consolidated high school; \$16,000; 2 stories; brick; McDonald & Favret, Contrs.; Shaw & Woleben, Archts., will supervise construction.

Mo., Kansas City—City Board of Education; Ashew School, 27th St. and Topping Ave.; \$233,577; 1 story; 230x250 ft.; brick; terra cotta trim; 10 classrooms, auditorium, domestic science and manual training rooms; Chas. Smith, Archt.; Rosenthal & Co., Contrs.

N. C., Greensboro—City Board of Education, J. Norman Wills, Chrmn.; Asheboro Street School; \$142,833; 3 stories; 178x60 ft.; concrete and wood floors; concrete foundation; Barrett roof; Starrett & Van Vleck, Archts., 8 W. 40th St., New York; Joe W. Stout & Co., Contrs., Greensboro; W. W. Dick, Greensboro, heating; W. Drummond Marrow, Newport News, Va., electric lights; Hunt Bros., Greensboro, plumbing.

N. C., Winston-Salem—City, Jas. G. Hanes, Mayor; \$139,820 North Winston School; 3 stories; fireproof; brick and concrete; classrooms, auditoriums and library; W. C. Northup, Archt., Winston-Salem; C. V. York, Contr., Raleigh.

S. C., Anderson—School Trustees, District No. 17, W. P. Wright, Secy.; \$16,700 addition to North Fant Street School; 34x68 ft.; 2 stories; 6 rooms; brick and brick veneer; concrete foundation; cement and wood floors; tin roof; C. G. Sayre, Archt., Anderson; Mitchell-Cox Lumber Co., Contr., Belton, S. C.

Tenn., Memphis—City Board of Education; \$80,000 Lincoln School for negroes; 2 stories and basement; reinforced concrete, brick and Bedford stone; white stone trim; 8 classrooms, manual training and domestic science departments, etc.; Herbert T. McGee, Archt.; Blair Construction Co., Contr.

Tex., Brady—School District Trustees; \$35,750 building; 2 stories; 119x75 ft.; brick and concrete; H. F. Kuehne, Archt., Littlefield Bldg., Austin; G. W. Britton, Contr., San Antonio.

Tex., San Angelo—Board of Education; two 1-story brick schools; \$16,584; O. S. Mills, Contr.

Stores.

La., Baton Rouge—Kornmeyer Furniture Co.; 2-story, fireproof store, St. Ferdinand St.; \$50,800; brick; Edw. F. Nield, Archt., Shreveport; Burke & Haley, Contrs., Baton Rouge.

N. C., Asheville—Slayden, Fakes & Co.; \$40,000 building at Biltmore; 2 stories; 50x160 ft. and 185x135 ft.; brick and concrete; concrete foundations; wood floors; metal ceilings and doors; steel sash and trim; composition roof; 2 elevators; J. E. Joyner, Contr., Pack Square.

Okla., Chickasha—Dr. U. C. Boon; 1-story brick building, 424 Chickasha Ave.; 25x100 ft.; Chas. Steckler, Contr.

Theaters.

Fla., Jacksonville—Conrad Mangels; \$14,000 theater and store, Florida St. between Darwin and Hickory Sts.; 1 story; brick; O. P. Woodcock, Contr.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Architects Lists.—Forbes Manufacturing Co., W. H. Forbes, Treas., Hopkinsville, Ky.—Complete list of Architects in Kentucky, Tennessee, Indiana, Mississippi and Georgia.

Barge (Steel).—U. S. Engr. Office, Montgomery, Ala.—Bids until Dec. 1 for 80x26x5 ft. steel barge; further information on application.

Barges (Steel Deck).—U. S. Engr. Office, Pittsburgh, Pa.—Bids until Nov. 25 to furnish and deliver 3 steel deck barges; further information on application.

Belts (Conveyor), etc.—Roper-Strauss-Ferst Co., Birmingham, Ala.—Several 18-in. conveyor belts with troughing pulleys, take up and driving pulleys; state price, condition, location and full description.

Boiler Repair Machinery.—John Robertson, 1435 N. Pattie Ave., Wichita, Kan.—To purchase complete line of boiler repair mch. and tools.

Boilers.—Wilson-Hock Co. (Mchy. Dealers), City Point, Va.—Dealers prices on three high pressure 6 ft. x 18 boilers suitable for lumber mill installation; used equipment desired but good condition, not used more than 2 yrs.

Boxes (Candy).—J. J. Stewart, Eustis, Fla.—To purchasing candy boxes and lithographing.

Bricks.—See Refining Equipment.

Bridge Construction.—City, Board of Awards, Wm. F. Broening, Prest., Baltimore, Md.—Bids until Nov. 22 to construct 910-ft. Ashland Bridge and approaches over Western Run, Baltimore County; 90-ft. steel span; reinforced concrete abutments and approaches; plans, etc. from Wm. A. Megraw, Water Engr.; G. H. Leaverton, Plant Engr.

Bridge Construction.—State Highway Comm., H. G. Shirley, Chrmn., Richmond, Va.—Bids until Nov. 23 for following projects; S-102, Route 8; repair bridge over Piscata-

way Creek, Essex County; 2640 lin. ft. piles.

S-215, A. and B, Route 13; 292-ft. 10-in. bridge over Appomattox River, Prince Edward County; 19-ft. roadway; 282.6 cu. yds. Class A concrete; 475 cu. yds. cement ruddle masonry; 41,700 lbs. reinforcing steel; 112,000 lbs. structural steel.

Approaches to bridge; 3614.4 sq. yds. 7x18-in. concrete roadway.

F-76A, Route 10; 228-ft. bridge over Buffalo Creek, Prince Edward County; 19-ft. roadway; 376.3 cu. yds. Class A concrete; 63,760 lbs. reinforcing steel; 1280 lin. ft. piles; Approaches to bridge; plans, etc. on file, and from following Dist. Engrs.; Project S-102, Fredericksburg, Va.; S-215, Lynchburg; F-76A, Richmond.

Buildings.—See Refining Equipment.

Building Materials.—Federal Land & Investment Co., D. J. Pancake, Prest., 910 3rd Ave., Huntington, W. Va.—Prices on building material.

Bridge Construction.—Cass County Commrs., Harrisonville, Mo.—Bids until Nov. 18 to construct bridge, consisting of 90-ft. low truss span and two 20 ft. steel and concrete approaches with 14 ft. roadway.

Bridge Construction.—Pulaski County Commrs. Road Improvement Dist. No. 10, H. S. Turner, Secy., Little Rock, Ark.—Bids until Nov. 28 for 4 bridges on Sec. 3; 375,000 lbs. structural steel; 96,000 lbs. reinforcing steel; 1050 cu. yds. concrete; plan, etc. from D. A. MacCrea, Ch. Engr.

Bridge Construction.—St. Simon's Highway Comsn., Glynn County Commrs., Brunswick, Ga.—Bids until Dec. 12 to build bridges and fills from mainland to St. Simons Island; two 40-ft. steel beam spans; 14,394 lin. ft. earth embankment; 4646 lin. ft. bridges; 46,000 lin. ft. creosoted wood piling; 420,000

ft. B. M. creosoted timber; 251,000 ft. B. M. creosoted wood flooring; 1200 sq. yds. stone rip rap 12-in. thick; plans, etc. on file and from State Highway Engr., Atlanta, Ga.

Bridge Construction.—State Highway Dept. Jefferson City, Mo.—Bids until Nov. 11 for bridge over Gasconade River, on Jefferson City-St. Louis highway. (Lately noted.)

Broom Machinery.—Herbert Stanley, Secy., Chamber of Commerce, Greenville, Miss.—To correspond with mfrs. of mchy. for making brooms; data and prices on establishing broom plant.

Candy.—See Confectioners Supplies, etc.

Cane Mills.—North Biloxi Improvements Assn., J. D. Hagaman, Prest., North Biloxi, Miss.—In market for cane mills.

Cars (Flat).—Wilson-Hock Co. (Mchy. Dealers) City Point, Va.—Three 36-in. narrow gauge flat cars, approx. dimensions are: 25x5 ft. wide overall; top of frame, 33 in. over rail, trucks located 4 ft. 6 in. from end of frame or 16 ft. between center line of truck, trucks to be 3 ft. 6 in. to 4 ft. wheel base, and 18 to 24-in. wheel diam.; built of spring type; both trucks and frame to be designed for 20 tons capacity equally distributed; dealers prices on slightly used equipment desired.

Chains (Conveyor).—Maritime Industries Co., Brunswick, Ga.—To purchase conveyor chains, about ¾x6-in.

Chemical, Power Equipment, etc.—American Machinery Equipment Co. (Mchy. Dealers) Providence rd., Myers Park, Charlotte, N. C.—Dealers prices on chemical, power equipment, cast and wrought iron boilers, steam specialties, etc.

Compressor (Steam Driven, Air).—Duncan Machinery Co., (Mchy. Dealers) Box 205, Knoxville, Tenn.—Jobbers prices on steam

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driven air compressor, 1500 to 2000 ft. air per min.; state condition, location and time of delivery.

Confectioners Supplies, etc.—J. J. Stewart, Eustis, Fla.—To purchase, candy, soda-water and confectioners supplies.

Cotton Gins.—North Biloxi Improvements Assn., J. D. Hagaman, Prest., North Biloxi, Miss.—In market for cotton gins.

Cotton Waste, etc.—United States Leather Corp., 28 W. Chippewa St., Buffalo, N. Y.—To correspond with dealers of cotton waste, garnettiers of cotton waste and garnettiers of waste from mercerized underwear.

Crane (Electric Traveling).—Broadfoot Iron Works, W. G. Broadfoot, Prest., Wilmington, N. C.—To purchase electric traveling crane with 50 ft. span, 3 motors, operated on 220 volts, 3 phase, 60 cycle; prefer second-hand.

Crushing Machinery.—R. P. Johnson, (Mchy. Dealers) Wytheville, Va.—To correspond with mfrs. of mchy. for reducing cast rock to sand for commercial purposes; either crushing or roller process.

Drainage.—Tensas Drainage Dist. and Third Drainage Dist. and the First and Second Wards Drainage Dist. Comms. acting jointly, Lake Providence, La.—Bids until Nov. 15 for excavation of Tensas Bayou canal involving approx. 1,250,000 cu. yds. earthwork; further information apply to J. R. Adams, Engr.

Dredge (Barger).—North Biloxi Improvement Assn., J. D. Hagaman, Prest., North Biloxi, Miss.—In market for barger dredge.

Dryer (Rotary).—Charles Earl Currie & Co., (Mchy. Dealers) Ashland, Ala.—Indirect heat rotary dryer about 6 ft. diam. and 90 ft. long; having capacity to dry 50 tons limestone per hr.

Dryer and Pulverizer.—Myers & Molers, 206 N. Potomac St., Hagerstown, Md.—Second-hand dryer and pulverizer to handle lime marl.

Elevator (Electric).—Pennsylvania Equipment Co., Norwood, Pa.—Second-hand, 2500 lb. electric elevator.

Engine.—Akers Lumber Co., Lynchburg, Va.—To purchase 125 H.P. stationary steam engine, plain slide valve or 100, 125 or 150 H.P. Corliss make; state condition make, etc.

Engine.—Calhoun Machinery Exchange (Mchy. Dealers) El Reno, Okla.—To purchase 10 to 30-in. Corliss engine; for Arizona delivery.

Engines.—Maritime Industries Co., Brunswick, Ga.—To purchase 12x20-in. Flier & Stowell twin engine; 80 H.P. and 150 H.P. steam engines.

Engines.—Wilson-Hock Co. (Mchy. Dealers), City Point, Va.—250-H. P. Corliss engines, right and left hand 16x36 in. Nordberg, heavy duty, type DD frame, 27 in x 13 ft. drive wheel, self-oiling system, slightly used; good price for quick sale.

Engine (Pumping).—Walter H. Taylor, 3rd., Director of Public Works, Norfolk, Va.—Bids until Nov. 27 for one 12,000,000 horizontal, gross compound, crank and fly wheel, condensing pumping engine of the double opposed type; plans on file or with Dabney H. Maury, Const. Engr., 1445 Monadnock Block, Chicago, Ill.

Engineers (Construction).—Lion Oil & Refining Co., Victor H. Smith, V.-P., 624 Finance Bldg., Kansas City, Mo.—Correspondence with construction engineer for all development work.

Farm Machinery.—North Biloxi Improvement Assn., J. D. Hagaman, Prest., North Biloxi, Miss.—In market for farm machinery.

Fences (Wire).—See Refining Equipment.

Fire Fighting Equipment.—Mayor and Board of Comms., Waco, Tex.—Bids opened Nov. 6 for following: 2000 ft. of 2½-in. cotton rubber lined fire hose, standard brand with couplings attached; three 35 gal. chemical tanks, copper and nickel plated, complete with acid receptacle brackets and bypass; four ¾-in. chemical shut-off nozzles; one 1-in. chemical shut-off nozzle 88 ft. of ¾-in. and 250 ft. of 1-in. chemical hose, 4 ply; R. L. Stribling, Controller.

Flooring (Sub and Top).—See Lumber (Framing and Flooring) Betterton-Rupert Coffee Co., Ashland, Ky.

Generator, etc.—J. C. Steele & Sons, Statesville, N. C.—35 to 45 KW generator preferably direct connected to first-class steam engine, voltage not over 250; good condition.

Girders.—See Lumber (Framing and Flooring) Betterton-Rupert Coffee Co., Ashland, Ky.

Grading and Drainage Construction.—Mingo County and Logan County Comms., Williamson, W. Va.—Bids until Nov. 18 to grade and drain the following sections of road on Trace Fort, Pigeon Creek in Harvey District, Mingo County and in Logan District of Logan County, crossing through head of Trace Creek into Trace Fork of Island Creek, approx. 3 mi.; plans and specifications with L. C. Linkhouse, Mingo County Engr. and J. N. Smith, Logan County Road Engr., Logan, W. Va.

Gravel.—Louisiana Highway Comsn., Raymond Bldg., Baton Rouge, La.—Bids until Nov. 21 to furnish f. o. b. cars at Crowley, La., approx. 5682 cu. yds. washed and screened gravel for surfacing project 372, Crowley-Kaplan highway, Acadia parish; further information from J. M. Fourmy, State Highway Engr.

Grinding (Mica) Machinery.—S. A. Thompson, Stuart, Va.—To correspond with mfrs. of mchy. for grinding mica.

Hull (Derrick Boat).—U. S. Engr., Office, Pittsburgh, Pa.—Bids until Nov. 20 (Eastern time) to furnish and deliver one steel derrick boat hull; further information on application.

Hull (Dipper Dredge), etc.—U. S. Engr. Office, Milwaukee, Wis.—Bids until Nov. 27 for construction of one dipper dredge hull and house; further information on application.

Ink Blotter (Roller), etc.—George T. Robinson, Calhoun, Ky.—To contract for mfr. of roller ink blotters and ink blotter materials.

Joists and Rafters.—See Lumber (Framing and Flooring) Betterton-Rupert Coffee Co., Ashland, Ky.

Lathe (Steel).—Stiles Mfg. Co., Bolivar, Mo.—To purchase used steel lathe, 8 ft. bed with gap to accommodate 24-in.

Levee Construction.—Mississippi River Comsn., Office of Secy., 1311 International Life Bldg., St. Louis, Mo.—Bids until Nov. 23 to construct about 380,000 cu. yds. of earthwork in Kings Lake Drainage Dist., Mo.; further information on application.

Levee Construction.—Mississippi Levee Comms., Greenville, Miss.—Bids opened Nov. 6 to construct about 10,000 yds. sub-levee at Lower Promised Land, south of Mayersville; J. S. Allen, Chief Engr.

Linotype Machine, etc.—J. F. Durham, Box 678, Mobile, Ala.—Prices on linotype or intertype machines.

Lithographer.—J. J. Stewart, Eustis, Fla.—Lithographer.

Lock and Dam Construction.—U. S. Engr. Office, Jacksonville, Fla.—Bids until Nov. 23 for construction of lock and dam at Moss Bluff on the Oklawaha river, Fla.; further information on application.

Log Haul-up.—Maritime Industries Co., Brunswick, Ga.—To purchase one log haul-up carrying 1x6-in. chains.

Lumber.—See Refining Equipment.

Lumber (Framing and Flooring).—Betterton-Rupert Coffee Co., Ashland, Ky.—Framing lumber and flooring, including 870 joists and rafters from 12 to 18 ft., various dimensions; 71 girders from 12 to 18 ft., various dimensions; 49 posts 9 to 14 ft., various dimensions; 8 post caps, 12x12-in. x 12 ft.; 13,100 ft. of ¾x6 No. 2 yellow pine, sub flooring and sheathing; 10,300 ft. ¾x4 top flooring, oak factory ends matched.

Mica.—S. A. Thompson, Stuart, Va.—Data on mica mining; also possible market for sheet, ground and scrap mica in large quantities; also exporters of mica.

Mill (Grinding).—Charles Earl Currie & Co. (Mchy. Dealers) Ashland, Ala.—Mill for dry grinding mica to 80 mesh product.

Miscellaneous Equipment.—Board of Directors, Jacksonville Branch, Federal Reserve Bank of Atlanta, J. C. Cooper, Chmn., Jacksonville, Fla.—Bids until Nov. 24 for general contract work, mechanical work, vault doors and equipment, and elevators in new building for Jacksonville branch; plans and specification an application to A. Ten Eyck Brown, Archt., Atlanta, Ga. and H. C. Dozier, Associate Archt., Jacksonville.

Miscellaneous Machinery.—L. S. Flexor, Soroki, Besarabia, Rumania.—To purchase mchy. for cultivation of corn and equipment to extract rubber, starch, oil, sugar, etc., from same; also equipment for mfr. of extracts, ether, etc. from medicinal plants.

Miscellaneous Supplies.—General Supply Committee, Auditors Bldg., 14th and B Sts., Washington, D. C.—Bids until Nov. 24 to furnish from Jan. 1 to June 30, 1923, electrical, plumbing and engineering supplies; lumber; mill work; packing boxes; building materials; furniture and floor coverings; described in Spec. 1, 6, 7 and 9 for use in Executive Depts.; further information on application to Committee or A. W. Mellon, Sec. of Treasury.

Miscellaneous Supplies.—Panama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Bids until Nov. 20 to furnish: Kerosene; crude carbolic acid; aluminum sulphate; boiler feed pumps; tack blocks; special bronze; sheet copper; galvanized pipe; wire finishing and copper sheathing nails; rubber gaskets; flange packing; canvas and rubber hose; water buckets; drinking glasses; napkins; turkish towels, etc. Blank forms and information (Circular 1502) on application to offices of Panama Canal; Asst. Purchasing Agts. at 24 State St., New York, 611 Gravier St., New Orleans, La.; U. S. Engr. Offices throughout country.

Miscellaneous Supplies.—Panama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Bids until Nov. 22 to furnish: oats; oil purifier; tractor mowers; steel rope; high tension insulators; electric motors; steel filing cabinets; dough mixing machines; duplicating machines; water coolers; copper wire; poultry netting; canvas; leather; ready roofing sheets; cement; lye; soap polish; cypress lumber, etc. Blank forms and information (Circular 1500 on application to offices of Panama Canal; Asst. Purchasing Agents at 24 State St., New York, 611 Gravier St., New Orleans, La.; Fort Mason, San Francisco, Cal.; U. S. Engr. offices throughout country.

Motors.—J. C. Steele & Sons, Statesville, N. C.—Several motors from 5 to 15 H.P. voltage not over 250; good condition.

Motor (Slip Ring).—G. R. Mueller Co. (Mchy. Dealers) Brown Marx Bldg., Birmingham, Ala.—500 H.P. slip ring motor, 3 phase, 60 cycle, 2200 volt.; 360 to 720 R.P.M.

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Motors (Spring).—Allen-Morison Sign Co., Inc., Lynchburg, Va.—To correspond with mfrs. of spring motors, to run from 12 to 24 hrs., similar to those used in revolving barber poles want spring motor to replace electric motor, 4 revolutions of shaft per min.

Nails.—See Refining Equipment.

Newspaper Plant, etc.—J. F. Durham, Box 678, Mobile, Ala.—Prices on compact newspaper plant, capacity about 6000 to 10,000 per hr. folded; 8 and 12 pages; suggest for most economical plant considered.

Overcoats and Sweaters.—Port Comms., Suite 230, New Orleans Court Bldg., New Orleans, La.—Bids opened Nov. 9 to furnish approx. 91 overcoats and sweaters for members of harbor patrol; on application to Supvr. of Purchases, 1 Canal St.

Paper (Newsprint).—J. F. Durham, Box 678, Mobile, Ala.—Prices on newsprint paper.

Paving.—Town Comms., Burnsville, N. C.—Bids until Nov. 15 for 7283 sq. yds. concrete sidewalks; plans, etc., from L. V. Edwards, Engr., Winston-Salem, or Burnsville.

Paving and Sewer Construction.—H. E. Ketchin, Town Clk., Winstonsboro, S. C.—Bids until Nov. 20 for sheet asphalt, asphaltic concrete or cement concrete pavement; 25,000 yds. paving; 8500 lin. ft. combined curb and gutter; 3300 lin. ft. concrete gutter; necessary storm sewers, catch basins and inlets; plans, etc. on file, or from Lockwood, Green & Co., Healey Bldg., Atlanta, Ga.

Photographic and Photolithograph Work.—Dept. of the Interior, Patent Office, Washington, D. C.—Bids until Nov. 13 for producing during last half of year ending June 30, 1923, by photolithographic or other process copies of drawings of the weekly issue of patents, assembled, stitched, banded and numbered, etc.; for further information apply to Chief Clk. of Patent Office.

Pipe Threading Machine.—Calhoun Machinery Exchange (Mchy. Dealers) El Reno, Okla.—To purchase pipe threading machine, to thread $\frac{1}{2}$ to 4-in. pipe inclusive.

Planer (Pony).—See Woodworking Machinery.

Press (Printing) and Paper Cutter.—C. L. Holland, 909 N. 15th St., St. Louis, Mo.—To purchase power paper cutter and printing press.

Planer (Wood).—Wilson-Hock Co., (Mchy. Dealers), City Point, Va.—Dealers prices on 8x10 in. wood planer that will dress on four sides.

Posts and Post Caps.—See Lumber (Framing and Flooring)—Betterton-Rupert Coffee Co., Ashland, Ky.

Power Houses.—United States Engineers Office, Norfolk, Va.—Bids until Dec. 4 for constructing 2 power houses, with wells, fuel tanks, railroad tracks, etc. at Fort Story, Cape Henry, Va.; information on application.

Press (Foot Punch).—Safety Button Co., Rock Hill, S. C.—Second-hand foot punch press; state price and condition.

Pumps.—See Refining Equipment.

Rails.—Hackney Wagon Co., Wilson, N. C.—1 or 2 mi. of 30 or 35 lb. rail.

Rails (Steel).—See Refining Equipment.

Refining Equipment, etc.—Lion Oil & Refining Co., Victor H. Smith, V.-P., 624 Finance Bldg., Kansas City, Mo.—All kinds of refinery equipment; brick; lumber, nails, wire fences, buildings, pumps, steel rails.

Repainting Bridge.—Jefferson County Comms., W. N. Trulock, Pine Bluff, Ark.—Bids until Nov. 21 for repainting Free Bridge across Arkansas River, bridge is 1600 ft. long, containing approx. 3200 tons

steel; for further information address Parkes Engineering Co., Engr., Citizens' Bank Bldg., Pine Bluff.

Rice Mills.—North Biloxi Improvement Assn., J. D. Hagaman, North Biloxi, Miss.—In market for rice mills.

Road Construction.—Abbeville County Highway Comsn., L. W. Keller, Secy., Abbeville, S. C.—Bids until Nov. 15 for 7.50 mi. top soil road from Lowndesville to Cherokee Ferry, known as Cherokee road; plans, etc., from H. B. Humbert, County Engr.

Road Construction.—State Highway Comsn., H. G. Shirley, Chrmn., Richmond, Va.—Bids until Nov. 23 for following projects: S-216, Route 7Y; 1.74 mi. 20-ft. gravel road from Washington's Old Home to intersection with Route 7.

S-185, Route 7; 8.44 mi. soil roadway from Wilderness to Lignum; 14,500 lbs., reinforcing steel.

F-100A, Route 5; 5.5 mi. 18-ft. concrete roadway from Franklin to Carresville, Nansemond and Isle of Wight Counties; plans, etc., on file or from following Dist. Engrs.; S-126, Fredericksburg; 2-185, Manassas; F-100A, Suffolk.

Road Construction and Paving.—Orange County, E. C. McCarver, County Judge, Orange, Tex.—Bids until Nov. 13 for following:

2 mi. Oil Field road; 21,120 sq. yds. concrete paving.

4.25 mi. Lower Beaumont road; 7400 cu. yds. shell or gravel surfacing; 110 cu. yds. concrete; 6656 lbs. reinforcing steel.

4.15 mi. Oil Field road; 7500 cu. yds. shell or gravel; 157 cu. yds. concrete; 7063 lbs. reinforcing steel.

10.66 mi. East Texas Highway No. 8; grade and construct drainage structures on 7.45 mi. earth road; surface 3.21 mi. with shell or gravel; 7100 cu. yds.

7.3 mi. Mauriceville road; 15,000 cu. yds. shell or gravel surface; 230 lbs. concrete; 16,733 lbs. reinforcing steel.

Extend city streets $\frac{3}{4}$ mi. concrete paving; J. E. Johnson, County Engr. (Lately noted.)

Road Construction.—Falls County Comms., E. M. Dodson, Judge, Marlin, Tex.—Bids until Nov. 15 to build 9 mi. gravel surfaced roads; Highway No. 44 in Dist. No. 5; detailed plans and specifications obtainable from County Clerk, Marlin, or J. P. Wehrung, County Engr., Chilton, Texas.

Road Construction.—Hillsborough County Comms., T. Friend, Chrmn., Tampa, Fla.—Bids until Nov. 17 to construct 160 mi. of 9 and 15 ft. roads, either brick, asphalt block, sheet asphalt, asphaltic concrete, cement concrete or bituminous macadam; for further information address Clk. of County Court.

Road Construction.—Greenville County Supvs., Greenville, S. C.—Bids until Nov. 16 to construct 15 mi. State road, Route No. 21 between a point near Cleveland and the N. Carolina line; work consists of 206,157 cu. yds. common excavation, 12,718 rock excavation, 29,067 cu. yds. top soil surfacing, 70,100 cu. yds. clay bound macadam, surfacing, etc.; further information on application to County Supvr. or State Highway Engr., Columbia.

Road Construction.—State Road Dept., Tallahassee, Fla.—Bids until Nov. 14 to construct following sections of roads:

Escambia County, 10 mi. portion of road No. 7, F. A. project No. 34.

St. Lucie County, 7.76 mi., portion road No. 4, F. A. project No. 36; work consists of grading, drainage and paving, alternate bids on; 3-in. penetration macadam on 8-in. rock base; 3-in. asphalt with binder course on 8-in. base and 6-8-6-in. plain concrete surface; plans and specifications with

County Engr., Pensacola, Fla., and Div. Engr., Fort Pierce, Fla.

Road and Bridge Construction.—Navarra County, A. P. Mays, County Judge, Corsicana, Tex.—Bids until Nov. 13 for concrete road through Richland Creek bottom, Road Dist. No. 15; 8500 sq. yds. 6-in. concrete pavement; 25,000 lbs. reinforcing steel; repair bridge and re-set pier on 60-ft. steel span, over Richland Creek; plans, etc., on file; McClendon & Purnell, County Engrs.

Road and Bridge Construction.—Board of Bond Trustees of Special Road and Bridge Dist. No. 3 of Levy County, Otter Creek, Fla.—Bids until Nov. 18 for grading approx. 18 mi. roadbed, construction of wooden bridges of various lengths, install and furnish necessary drainage pipes and clearing about 88 acres right of way; plans with E. H. Yearly, Secy., Otter Creek, or D. Frazer Thomas, Engr., Cedar Key, Fla.

Roller (Road).—Board of County Comms., Hector Harris, Chrmn., West Palm Beach, Fla.—Bids until Nov. 10 for one 5-ton spur geared tandem road roller, double cylinder, gasoline driven, f.o.b. West Palm Beach; information on application.

Roller (Steam).—Battley Machinery Co., Rome, Ga.—To purchase 10 ton steam roller, machine large enough to develop 15 H.P. at belt.

Salt (Refuse and Low Grade).—Pomona Terra-Cotta Co., Pomona, N. C.—Prices on refuse and low grade salt, car lot shipments.

Sand and Gravel (Concrete).—Port Comms., Suite 200, New Orleans Court Bldg., New Orleans, La.—Bids until Nov. 9 to furnish approx. 820 cu. yds. concrete sand and 1285 cu. yds. concrete gravel; specifications with Supvr. of Purchases, 1 Canal St.

Saw (Cut-off) etc.—Maritime Industries Co., Brunswick, Ga.—To purchase one 72-in. diam. log cut-off saw; one top saw Mandrell, 2-7/16-in. x 8 ft. long with boxes.

Saws (Rip and Cut-off).—See Woodworking Machinery.

School Equipment.—Gastonla Graded School Comms., R. C. Patrick, Secy., Gastonia, N. C.—Invite bids for chemistry, physics, biology, and general science laboratory equipment; pupils desks, chairs, window shades, lantern screens, lantern maps, fire extinguishers, etc.; woodworking shop equipment; miscellaneous class room; office and library furniture; gymnasium, laundry, lunch room, kitchen and print shop equipment; stage, auditorium outfit, pipe organ, etc.; for further information apply to White, Streeter & Chamberlain, Archt., Gastonia.

Screening (Gravel) and Washing Machinery.—S. L. Pendlar, Fredericksburg, Va.—To correspond with mfrs. of gravel screening and washing mchy.

Sewer Construction.—Comms. of Sewerage of Louisville, Ky., Oscar Fenley, V. Chrm.—Bids until Nov. 21 for following sewer construction: approx. quantities, for Payne St. sewer (combined sewer)—520 lin. ft. of 24-in., 580 lin. ft. of 21-in., 410 lin. ft. of 18-in., 380 lin. ft. of 15-in., 20 lin. ft. of 10-in., alternate bids invited on vitrified clay and cement concrete pipe; Spava Ave. laterals north (separate system)—Drain—410 lin. ft. of 30-in., 780 lin. ft. of 24-in., 430 lin. ft. of 21-in., 450 lin. ft. of 18-in. and 330 lin. ft. of 15-in.; Sewer—2250 lin. ft. of 8-in. alternate bids are invited on vitrified clay pipe, cement concrete pipe and monolithic concrete for the 30-in. drain; and on vitrified clay pipe and cement concrete pipe for sizes less than 30-in.; drawings, etc. obtained from office of Comms., 417 W. Main St.; J. B. F. Breed, Ch. Engr.

Sewer Construction.—Washington Suburban

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Sanitary Dist. Comsn., Evans Bldg., New York Ave., Washington, D. C.—Bids until Nov. 13 for building 14,200 ft. of 6" to 15" sewer in Mount Rainer and vicinity; plans obtainable from Robt. B. Morse, Ch. Engr. of District, Hyattsville, Md.

Sheathing.—See Lumber (Framing and Flooring)—Betterton-Rupert Coffee Co., Ashland, Ky.

Soda Straw Machinery.—Robinson & Sons, 145 N. McNab St., Hamilton, Canada.—To purchase mchy. for mfgr. of soda straws.

Stacks (Steel).—Wilson-Hock Co., (Mchy. Dealers), City Point, Va.—Dealers prices on 36-in. x 80-ft. steel stack for 150-H. P. boiler.

Steel Buildings, etc.—Greene Engineering Co., Philadelphia, Pa.—To purchase two steel buildings, approx. 50 ft. span with 12 ft. clear head room, corrugated iron cover supporting roof, or would consider wooden and sides; or buildings with columns for structure buildings with corrugated galvanized iron covering; state full particulars, price, age, type, with sketch or plans.

Sticker (Door and Sash).—See Woodworking Machinery.

Structural Steel.—Port Comms., Suite 200, New Orleans Court Bldg., New Orleans, La.—Bids until Nov. 16 for furnishing, erecting and painting of structural steel required for 7th St. shed; specifications on application to Supvr. of Purchases, 1 Canal St.

Sugar Mills.—North Biloxi Improvement Assn., J. D. Hagaman, Prest., North Biloxi, Miss.—In market for sugar mills.

Tenoner.—See Woodworking Machinery.

Tanks (Storage).—Clay County Co-operative Telephone Assn., C. S. Allenden, Mgr., Clay Center, Kan.—To purchase 2 gasoline storage tanks.

Tank (Storage).—Wilson-Hock Co., (Mchy. Dealers), City Point, Va.—Dealers prices on 10,000 gal. oil storage tank for installation under ground.

Tapping Machine.—Wilson-Hock Co., (Mchy. Dealers), City Point, Va.—Dealers prices on Müeller tapping machine.

Tractors.—North Biloxi Improvement Assn., J. D. Hagaman, Prest., North Biloxi, Miss.—In market for tractors.

Transformers.—Wilson-Hock Co., (Mchy. Dealers), City Point, Va.—Dealers prices on some 2, 3 and 5 KVA. single phase, 60-cycle, 2200-110-220 volt transformers.

Water Work Improvements.—City of Bay St. Louis, Miss., R. W. Webb, Mayor.—Bids until Nov. 29 for material and labor for constructing water works improvements, approx. following equipment and material required: two 750 G. P. M. motor drive centrifugal fire pumps; one 75,000 gal. steel tank and tower; one 125,000 gal. concrete reservoir; 3000 ft. of 8-in. cast iron pipe; 6000 ft. of 6-in. cast iron pipe; 26,000 ft. of 4-in. cast iron pipe; sundry hydrants, valves, fittings etc., labor, laying pipe and general construction; plans and specifications with City Clerk, or from Swanson-McGraw, Inc., United Fruit Bldg., New Orleans, La.

Wire Novelties.—S. Y. Allen, Box 615, Fort Meade, Fla.—To correspond with mfrs. of wire novelties.

Woodworking Machinery.—Virginia Builders Supply Co., Newport News, Va.—One pony planer, morticer, tenoner, combination rip and cut-off saw, door and sash sticker, Aren or belt sander and one door clamp; second-hand mchy. but in good condition.

Wreck Removal.—U. S. Engr. Office, Charleston, S. C.—Bids until Nov. 27 for removing wreck of schooner Phoebe Crosby; further information on application.

Financial News

New Financial Corporations.

Fla., Jacksonville—Fidelity Savings and Investment Co., chartered with \$25,000 capital.

Ga., Eatonton—Farmers and Merchants Bank, capital \$25,000, inceptd. by J. N. Hawkins, H. H. Howard and others.

Ky., Hazard—Kentucky Real Estate Mortgage Co., capital \$250,000, inceptd. by T. D. Draughn, H. K. Baker, J. M. Baker, J. A. Roan and Jesse Morgan.

Md., Baltimore—Gross Building and Loan Assn., capital \$25,000, inceptd. by Jacob A. Gross, Samuel Fleischer, and Harry B. Gross.

Md., Baltimore—Paul J. Prodoehl & Co., 201-203 Maryland Casualty Building, capital \$50,000, inceptd. by Paul J. Prodoehl, Wm. C. Ludwig and Louis Boller.

Mo., Kansas City—Bankers Automobile Finance Co., capital \$25,000, Shareholders; H. J. Shepard, Dev. Thatcher, Curtis G. Smith, I. F. Sweeney.

Mo., Springfield—Industrial Loan and Investment Co., capital \$100,000, inceptd. with Dr. J. H. George, Prest.; C. C. Martin, Vice-Prest.

Mo., Springfield—Commonwealth Savings and Loan Assn., capital \$1,000,000, Directors: W. E. Keltner, R. W. Catlett, W. P. Keltner and others.

N. C., Asheville—Commercial Guarantee Co. capital \$100,000, Subscribers Joseph Kartus, J. B. Breman and M. Kartus.

N. C., Asheville—Pack Theatre Holding Corp. capital \$100,000, inceptd. by S. Sternberg, S. H. Friedman, D. W. Misenheimer, C. S. Reed and others.

Okla., Boynton—American National Bank, capital \$25,000, inceptd. with H. L. Wineland, Prest.; W. C. Wells, Cashier.

Tenn., Kingston—First National Bank, capital \$25,000, Correspondent; D. H. Evans.

Tex., DeKalb—First National Bank; conversion of First State Bank, capital \$100,000, Correspondent; C. C. Crump.

Tex., Dickens—Farm Loan Assn., capital \$45,400, inceptd. with R. R. Wooten of McAdoo, Prest.; S. L. Davis, Secy.-Treas.

Va., Ashland—Hanover Bank, capital \$28,000, inceptd. with S. J. Daswell, Prest.; F. E. Nolting, Vice-Prest.; W. L. Foy, Cashier.

New Securities.

Ala., Mobile—Improvement—First National Bank purchased \$92,000, 5% bonds. Address The Mayor.

Ala., Russellville—Refunding—City sold \$7500, 6% bonds to J. L. Arlitt, Littlefield Bldg., Austin, Tex. Address The Mayor.

Ala., Russellville—School—J. L. Arlitt, Littlefield Bldg., Austin, Tex. purchased \$25,000 6%, \$1000 denom. bonds from City. Address The Mayor.

Ark., Clarksville—Johnson County No Fence Dist. No. 1 sold \$38,000 5½%, \$500 denom. bonds, to Burkholder Bond Co., St. Louis.

Ark., Ft. Smith—Water—Bd. of Improvement, Fort Smith Water Works Dist. receives bids until Nov. 28 for \$350,000, 5% bonds. Address Fagan Bourland, Chrmn.

Ark., Ft. Smith—Re-funding. Municipal Water Plant—City Comsn., contemplates issuing \$1,750,000 bonds.

Ark., Osceola—Road—Comms. of Wardell-Whitton Road Dist., sold \$15,000, 6% bonds to M. W. Elkins & Co., Little Rock.

Ark., Pine Bluff—Paving—Theis & Diestelkamp Investment Co., St. Louis purchased \$121,000, 5%, \$500 and \$1000 denom. bonds. Address The Mayor.

Fla., Bushnell—Road—Sumter County Comms., will vote on \$684,000 bonds. (Lately noted.)

Fla., Dade City—J. L. Arlitt, Littlefield Bldg., Austin, Tex., purchased \$750,000 bonds from Pasco County Highlands Special Road and Bridge Dist.

Fla., Perry—Street and Drainage—Town, J. E. Powell, Clk. receives bids until Nov. 21 for \$25,000 street and \$15,000 drainage bonds all 5%, \$1000 denom. bonds.

Fla., Sarasota—Jo. Gill, City Clk. receives bids until Nov. 6 for \$70,000, 5% bonds.

Fla., Starke—Water and Light—C. A. Futch, Clk. Bd. of Bond Trustees receives bids until Nov. 15 for \$36,000, 6%, \$1000 denom. bonds.

Fla., Tallahassee—Sewer and Light—City votes Nov. 21 on \$145,000, 5% bonds. Address The Mayor.

Fla., Tallahassee—Road—State Road Dept. receives bids until Nov. 23 for \$180,000, 5% bonds.

Fla., Tampa—School—Hillsborough County, J. E. Knight, Supt., Bd. of Public Instruction sold \$60,000, 6% bonds to Bumpus, Hull & Co.

Ky., Ludlow—Fire Dept. and City Building—City votes Nov. 7 on \$40,000, 5% bonds. Address The Mayor.

La., Abbeville—Vermillion Parish sold \$6000, 6% bonds to the Bank of Abbeville. Address Parish Police Jury.

La., Donaldsonville—Bank of Baton Rouge purchased \$500,000, 5% bonds from Lafourche Basin Levee Dist.

La., Leesville—School—Vernon Parish, receives bids until Nov. 21 for \$155,000, 6% bonds. Dr. F. P. Jones, Prest. of Parish Bd. of Education.

La., Monroe—School—Bonita School Dist., Morehouse Parish issues \$5000 bonds.

La., Opelousas—Road—St. Landry Parish Road Dist. No. 4, F. Octave Pary, Prest., Police Jury receives bids until Dec. 4 for \$60,000, 5%, \$1000 denom. bonds.

La., Shreveport—School—Caddo Parish School Dist. No. 1 sold \$1,000,000, 5% bonds to Caldwell & Co., Nashville, at premium. School Comms.

Md., Elkton—School—Cecil County issues \$150,000 bonds. Address County Comms.

Miss., Brookhaven—Water and Light—A. K. Tigrett & Co., Memphis, purchased \$30,000, 5½% bonds. Address The Mayor.

Miss., Cleveland—Courthouse—Sutherland Barry & Co., New Orleans, purchased \$150,000 bonds. Address The Mayor.

Miss., Hernando—Goodman Continuous Highway Dist., sold \$15,000, 6% bonds to A. K. Tigrett and Co., Memphis, Tenn., at par and accrued interest. Address The Mayor.

Miss., Jackson—Armory—Hanchett Bond Co., Chicago, purchased \$60,000, 5%, \$500 denom. bonds. Address The Mayor.

Mo., Holden—Cemetery—City voted \$3000 bonds. Address The Mayor.

Mo., Kansas City—Fire Alarm—Guaranty Trust Co., purchased \$25,000, 5% bonds. Address The Mayor.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.



Caterpillars are made in sizes suitable for trucks of every type and weight

What users will tell you about Caterpillar tires

When a truck owner has tried out various types of tires and recommends Caterpillars, it is pretty safe to follow his advice. He is in position to know from actual experience what Caterpillars will do and his judgment is influenced neither by theory nor prejudice.

That is why we prize so highly the hundreds of letters which we have received from Caterpillar users, all of which are as enthusiastic in their praise of Caterpillars as the one quoted below.

"We are enclosing photo of one of our two-ton Federal trucks equipped with Caterpillar tires.

"The equipment shown in this photo has given better than eight thousand miles and from all appearances, they have worn practically none.

"We have all of our trucks equipped with this type of tire and believe it is the best truck equipment both from a mileage and up-keep standpoint. We will be glad to recommend this equipment to any truck operator."

This letter was written by the Kelly Bros. Company of Atlanta, Georgia, but any other truck operator who has used Caterpillars will tell you practically the same.

The ability of Caterpillars to get traction on almost any kind of road, their exceptional cushioning qualities and their habit of delivering double the average mileage of any other type of tire seldom fail to win the unqualified endorsement of the truck operator who gives them a trial.

U. S. Government tests show that Cushion Tires are 50% easier on roads than solid tires. Caterpillars are an advanced type of cushion tire.

There is no Caterpillar Tire but the one that Kelly makes

KELLY-SPRINGFIELD
TIRE COMPANY



250 WEST 57th STREET
NEW YORK, N. Y.



Mo., Kansas City—School—School Dist. Jackson County voted \$5,000,000, 4½% bonds. Address School Comms.

Mo., Kirksville—School—Bd. of Education votes Nov. 21 on \$190,000 bonds.

Mo., Vandalia—School—City votes Nov. 14 on \$70,000 bonds. Address The Mayor.

N. C., Tarboro—School—Bd. of Education receives bids until Dec. 2 for \$22,000, 6%, \$1000 denom. bonds.

N. C., Wadeville—School—Hanchett Bank Co., Chicago, purchased \$5000, 6% bonds. Address Wadeville School Dist. Comms.

N. C., Washington—School—City voted \$300,000 bonds. Address The Mayor.

N. C., Waynesville—Street, Water—Bd. of Aldermen receives bids until Nov. 20 for \$150,000, \$1000 bonds.

Okl., Norman—Sewer, Water, Street and Fire—C. Edgar Honnold, Oklahoma City, purchased \$100,000 bonds. Address The Mayor.

S. C., Florence—Indebtedness—Florence County votes Nov. 7 on \$700,000 bonds. Address County Comms.

S. C., Winsboro—Road—Fairfield County will issue \$500,000 bonds. Address County Comms.

Tenn., Fayetteville—Road—Caldwell & Co., Nashville, purchased \$100,000, 5½% bonds. Address Lincoln County Comms.

Tenn., Friendship—School—A. K. Tigrett and Co., Memphis, Tenn., purchased \$6000 bonds, at par and accrued interest. Address The Mayor.

Tenn., Greenville—City sold \$100,000 bonds, J. E. Biddle, City Atty.

Tenn., Kingsport—Public Improvement—Seasongood & Mayer, Cincinnati, purchased \$20,000, 6% bonds. Address The Mayor.

Tenn., Shelbyville—Street—American National Bank, Nashville, purchased \$50,000, 5½% bonds at par. Address The Mayor.

Tex., Beaumont—Sanitarium—Jefferson County voted \$50,000 bonds. Address County Comms.

Tex., Beaumont—Improvements—City sold \$1,975,000 bonds. T. J. Roark, City Mgr.

Tex., Commerce—School—Kauffman-Smith-Emert & Co., St. Louis, purchased \$120,000, 5½%, \$1000 denom. bonds. Address The Mayor.

Tex., Denison—School, Water, Sewer and Paving—Grayson County voted \$175,000 bonds. Address County Comms.

Tex., Freeport—Street—First Municipal Bond & Mortgage Co., Dallas, purchased \$25,000, 6%, \$500 denom. bonds. Address The Mayor.

Tex., Hedley—Municipal Improvement—City will vote on bonds. Address The Mayor.

Tex., Linden—Road—Cass County voted \$20,000 bonds. Address County Comms.

Tex., Rotan—Water—City votes Nov. 28 on \$50,000 bonds. Address The Mayor.

Tex., Terrell—Road—Kaufman County, Terrell Road Dist., will vote Nov. 14 on \$35,000 bonds. W. P. Williams, County Judge, Kaufman, Tex.; L. M. Ferlet, County Engr., Terrell.

Tex., Tulla—School—Independent School Dist. receives bids until Nov. 6 for \$100,000, 5½% bonds. Address School Comms.

Tex., Wichita Falls School—Friebert Independent School Dist., voted \$5000 bonds.

Va., Bristol—Street—Caldwell & Co., Nashville, and the Dominion National Bank, Bristol, jointly purchased \$50,000 bonds. Address The Mayor.

Va., Clintwood—Road—R. M. Grant & Co., Chicago, purchased \$400,000, 5½%, \$1000 denom. bonds. Address The Mayor.

Financial Notes.

Textile Bank of (West) Greenville, S. C., contemplates increasing capital to \$50,000.

Trade Literature.

Small, Portable Electric Instruments.

The Weston Electrical Instrument Co., Newark, N. J., has brought out a new and unique line of small portable instruments for use on alternating current circuits and known as the "Weston Jr." information concerning which will be found in Bulletin 2006. This group of instruments includes wattmeters, voltmeters, ammeters, and milliammeters, and it will supply a real want in factories, isolated power plants, central stations, laboratories of educational institutions for field testing, etc., because these instruments are compact, light and inexpensive. Besides, they possess the same superior character that distinguishes other products of this company.

Machinery Anchorage System for Factories.

A fully illustrated catalog is published by the Midwest Steel & Supply Co., Inc., 23 West 44th Street, New York, showing many applications of the Midwest system for anchoring and supporting machinery, transmission units, motors, pipes, cables, etc., and also containing considerable interesting engineering data. For use in this system are steel sections and accessories, comprising rolled steel box and L rails and steel stringers, which the company says, have made it possible and practical to provide, particularly in new buildings, for the location of transmission and all other equipment which is to be attached to ceilings, walls or floors and practically, as well as theoretically, the different units accommodate themselves to the requirements of mill owners. The box rails, or continuous socket inserts, become an integral part of a concrete building, being placed in the centering before pouring. The steel stringers are somewhat similar to structural shapes, but they constitute attaching or anchorage mediums in connection with clips of this make. They are not used for construction, but for supporting shaft hangers, motors, pipes, cables and the like, and they are furnished in desired lengths. Furthermore, the Midwest system is described as being a truly unit system to be altered or added to at will, and it is flexible to the last degree.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Contract for Another Factory Building.

The Ideal Electric & Manufacturing Co., of Mansfield, Ohio, have announced the award to the Austin Company, of Cleveland, of their contract for an additional factory building which will be 325 feet long and 100 feet wide and will have a 50-foot wide, 20-ton crane aisle, besides two machine shop aisles 25 feet wide.

District Sales Manager Named.

Jenkins Bros., manufacturers of valves, sheet packing, gaskets, etc., 80 White Street, New York, have appointed William LeCompte as sales manager in charge of their New York territory. Mr. LeCompte has been a member of the sales organization of this firm for 25 years and possesses wide experience and knowledge as to the engineering, contracting and jobbing trade.

Burnt Plant Replaced.

The Western Screw Products Co., producers of high-grade machine screw work, St. Louis, Mo., have secured a new permanent location at Main Street and St. George Street, in that city, where they are equipping a new plant with modern machinery to take the place of their plant recently burned. Some of the machinery will, it is stated, be in production by November 15. The capacity range of the plant will be increased so that the company is able to take on screw machine work up to and including 2½-in. diameter. The company specializes in plain and castle nuts and special parts made to blueprints, drawings or samples. The raw material in stock was in a building not seriously damaged by the fire; consequently there will not be any delays for lack of material.

Purchasing Agent Appointed.

Harry J. Reece, formerly manager of the order department of the Independent Pneumatic Tool Co., 600 West Jackson Boulevard, Chicago, Ill., has just been appointed to the position of purchasing agent in place of Thomas J. Keegan, resigned.

Resigned to Become City Manager.

Walter A. Richards, assistant superintendent and resident engineer of the Columbus Manufacturing Co., Columbus, Ga., has resigned to accept the position of City Manager of Columbus, which was unanimously tendered to him by the City Commission, effective November 4. Mr. Richards is a son-in-law of F. B. Gordon, president of the Columbus Manufacturing Co.

Opens Office In Atlanta.

The Weston Electrical Instrument Company, Newark, N. J., has announced that G. P. Atkinson, who for several years has been connected with its home office sales organization, has opened an office in Atlanta, Ga., to cover the sales territory in Georgia, South Carolina and the northern part of Alabama. In addition to the Weston Instruments, Mr. Atkinson will sell several other nationally recognized lines of electrical equipment.

Septic Sewage Tanks for Rural Use.

The Universal Concrete Products Co., New Martinsville, W. Va., manufacturers of concrete blocks, concrete pipe, building material, etc., have recently added to their line of products the Universal septic tanks which solve sewage disposal problems in numerous communities. These tanks, it is noted, can be used with or without running water, and are suitable for installation in industrial villages, at country schools, or residences in suburban or rural districts.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.



At left: Washington Heights, maintained with "Tarvia-B" since 1916.



Above: Du Bois St., maintained with "Tarvia-B" since 1916.

Below: Benkard Ave., maintained with "Tarvia-B" since 1913.

"Tarvia-B" makes good in Newburgh—

Benkard Avenue, pictured in the circle, was the first Tarvia street in the City of Newburgh, New York. It was treated with "Tarvia-B" in 1913, and again in 1914 and in 1915.

The results were so satisfactory that in 1916 other macadam streets were given their initial Tarvia treatments, and the list has been growing ever since. Not until last year, however, when the 18 miles of roadway shown on the accompanying street map were surfaced-treated with "Tarvia-B", was the use of all other kinds of road-maintenance materials entirely abandoned in favor of Tarvia.

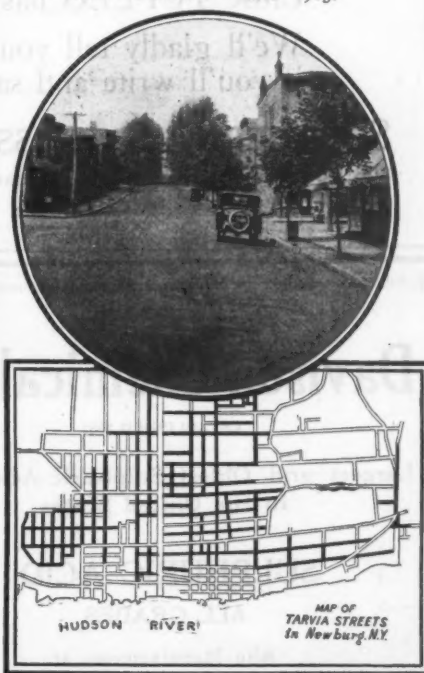
Describing Newburgh's experience with Tarvia, Mr. W. J. McKay, City Manager, wrote under date of March 17, 1922:

"It is with a great deal of pleasure that I inform you that the results obtained from the use of your 'Tarvia-B' on the streets of this city last season were more than satisfactory.

"While we are always in the market for material cheaper than the material we used the preceding season, it would take a considerable difference in price to have us make any change in the product to be used for the season of 1922."

Economy must be the goal of every conscientious public official. And the officials of Newburgh, and hundreds of other cities and towns throughout the country, have found from experience that Tarvia is the most economical of all road materials. Some others may be a little cheaper *per gallon* but the small difference in first cost is much more

than offset by the big difference in the result obtained.



Tarvia

**For Road Construction
Repair and Maintenance**

A Grade for Every Purpose

Tarvia is made in various grades for all road purposes—new construction, repairs and maintenance. An illustrated booklet telling of the different Tarvia treatments will gladly be sent free, on request to our nearest branch.



New York
Detroit
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Boston
Kansas City
Milwaukee
Richmond
Houston
Montreal

The **Barrett** Company
Toronto
Winnipeg
Vancouver

St. Louis
Minneapolis
Bangor
Latrobe
Denver
St. John, N. B.
Cleveland
Dallas
Washington
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Johnstown
Elizabeth
Pittsburgh
Salt Lake City
Lebanon
Buffalo
Halifax, N. S.

THE BARRETT COMPANY, Limited:

T-U-P-E-L-O

is a species of lumber that might well be said to be "grown to order" for

FACTORY FLOORS, PLATFORMS,

and other places and uses where "wear and tear" must be expected and provided for. *Leave it to TUPELO!*

This Softwood Hardwood has an "involved" grain which keeps it from splintering or splintering. A TUPELO floor wears smooth because it wears little—always looks well, because TUPELO has a fine, white color and a satiny sheen.

We'll gladly tell you the whole, interesting story of TUPELO if you'll write and say "we're listening." When? TODAY?

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Largest and Oldest Sulphuric Acid Plant
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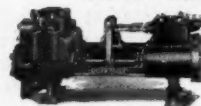
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ALFRED BOX & COMPANY, INC. PHILA. PA.

"Our Practice is to Analyze—and Buy the Best"

"We Made No Mistake When we Bought Two 21-E Smith Pavers"

say J. A. Kreis & Sons.

In spite of stringent specifications and inspection this southern contracting firm reports wonderful records on the Reidsville contract.

Like many other contractors, they have found that the speed of the Smith keeps them hustling to get material to it fast enough.

Engineer Duncan says the operators claim Smith Pavers the handiest machines. Mr. R. H. Kreis says "compared to other pavers—the Smith is the last word."

And this company knows Smith quality and dependability because they use other Smith Concrete Mixers as well as the Pavers.

Our Catalog 409-D tells all about the 1922 model Smith Paver—a copy is yours for the asking.

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J. A. KREIS & SONS GENERAL CONTRACTORS

FIELD OFFICE
Danville, Va. Route No. 4

August 22-1922.

T. L. Smith Co.,
Milwaukee, Wis.

Gentlemen:

We are pleased to advise that our experience with Smith Pavers leads us to recommend them most highly.

Our practice has always been to analyze and buy the best. We made no mistake when we bought two 21-E Smith Pavers for our Reidsville contract.

In spite of stringent specifications and inspection we are making wonderful records. Our daily average is very gratifying and in every instance our greatest problem is to get materials for these Pavers.

We laid twenty-two hundred and fifty (2250) feet in five working days last week, and have run as high as five hundred and thirty-six (536) feet in one day.

Our operators say it is the handiest machine they ever ran, and are the best boosters on the job.

Feeling sure that other contractors will feel as we do, we are

Yours very truly,

J. A. Kreis & Sons,
Per *Mr. Duncan*
Engineer.



J. A. KREIS & SONS GENERAL CONTRACTORS

FIELD OFFICE
Camp. No. 1 Ruffin, N. C.
Aug. 17th, 1922.

The T. L. Smith Company,
Milwaukee, Wis.

Gentlemen:

Attention: Mr. F. E. Bager.

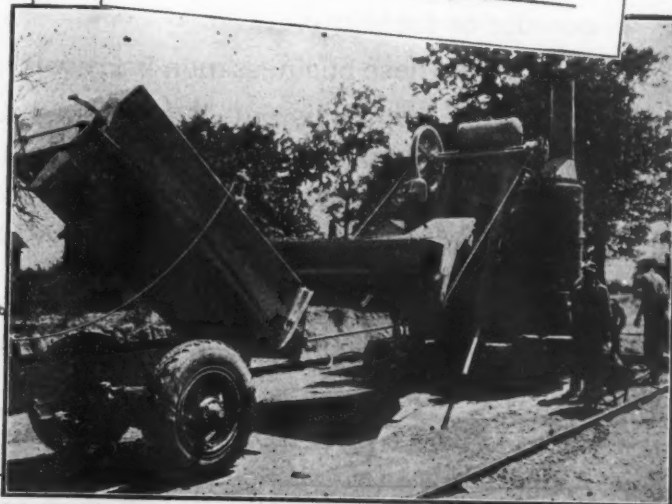
Replying to your letter of the 14th, in regards to the Smith Paver on this end of the job, I beg to advise that this paver has not given the least bit of trouble and as compared with other pavers I have had experience with, I want to say that this is the last word in Pavers. I think with the service and treatment that the American Hardware and Equipment Co. has given us not only with these two Pavers but with the other Smith Mixers we have bought from them is unsurpassable. We are glad to say that we are more than pleased and in the future if we buy any more Pavers you can rest assured that they will be Smiths Pavers.

Trusting that we can favor you by a word now and then as we meet with the different contractors in regards to the Smith Pavers and the Service we have had from your representatives, we are

Yours very truly,

J. A. Kreis & Sons

Per *Mr. Bager*



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BALTIMORE, MD.

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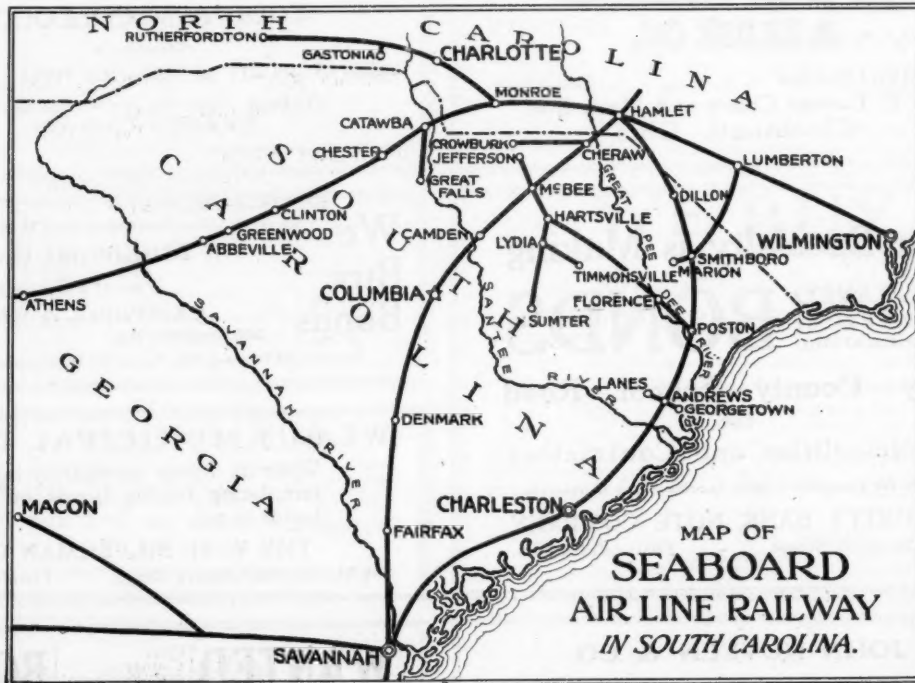
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We want to buy bonds issued by cities, towns
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South Carolina's Industrial Growth Offers Sound Basis for Future Expansion



South Carolina—from the mountain tops of the Appalachians on its northwestern border—over the Blue Ridge—across the rolling Piedmont Plateau—onto the broad Coastal Plain—thence to its ports on the Atlantic Ocean—is a state of remarkable activities and undeveloped possibilities.

Streams are being harnessed to a continually increasing extent to provide hydro-electric power to turn the wheels of industry. For over one hundred years South Carolina textile mills have manufactured cotton—today there are over 5,000,000 spindles, and nearly 115,000 looms representing about 1/6 of the spindles and looms of the entire country. In addition, there are numerous knitting mills as well as bleacheries and dye works.

Its fertilizer industry, in the forefront of all states,

stimulates the annual production of \$450,000,000 worth of farm crops.

Capital invested in manufactures totals \$375,000,000—the products manufactured aggregate around \$400,000,000 annually.

There are inexhaustible supplies of stone, granite and clay. Lumber and naval stores play an important part in the industrial activities of the State. Adequate home-grown labor—raw materials and hydro-electric power are alike available.

The Seaboard Air Line Railway crosses and re-crosses South Carolina in several directions. All along the line there are abundant opportunities for the establishment of profitable industries, or prosperous farming enterprises.

Full co-operation will be extended those seeking further specific information about the opportunities in South Carolina as well as in other States traversed by this railroad.

JESSE M. JONES, General Development Agent

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Our Industrial Department will give information regarding factory and commercial sites, labor conditions, housing, taxation, cost of fuel, power and raw materials, as well as rates on raw materials and finished products. Inquiries treated as confidential.

Chesapeake and Ohio Railway Co., Richmond, Virginia

PROPOSALS

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GOOD ROADS

Bids close November 22, 1922.

PROPOSALS for oats; oil purifier, tractor mowers, steel rope, high-tension insulators, electric motor, transformer, steel filing cabinets, dough-mixing machine, duplicating machine, water coolers, machine bolts, steel rivets, brass cocks and valves, copper wire, seizing wire, barbed wire, poultry netting, fuses and renewals, attachment plugs, mop handles, padlocks, snaths, tacks, solid-rubber tires, rubber-and-fabric tubing, steam hose, water and air hose, canvas, leather belting, sole leather, ready roofing, sheets (lead, brass, and copper), pig tin, ferromanganese, furnace cement, lye, soap polish, rubber tape, sandpaper, emery cloth, copying pencils, paper, tag board, and cypress lumber. Sealed proposals will be received at the Office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 o'clock a. m., November 22, 1922, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this Circular (1500) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City, 611 Gravier Street, New Orleans, La.; and Fort Mason, San Francisco, Calif.; also from the United States Engineer Offices in the principal cities throughout the United States. A. L. FLINT, General Purchasing Officer.

Bids close November 15, 1922.

"PROPOSALS FOR 20 OFFICERS' QUARTERS.—Office of the Constructing Quartermaster, Edgewood Arsenal, Md. Sealed proposals will be received in this office until 11:00 A. M., November 15, 1922, and then opened, for the construction of 20 sets of officers' quarters, at Edgewood Arsenal, Md. Plans and specifications may be obtained at this office, upon the deposit of \$10.00 which will be refunded upon the return of same in good condition. The right is reserved to accept any or to reject all bids for this project."

Bids close November 20, 1922.

PROPOSALS FOR kerosene, crude carbolic acid, alumina sulphate, boiler-feed pumps, tackle blocks, special bronze, sheet copper, galvanized pipe, wire finishing nails, copper sheathing nails, rubber gaskets, flax packing, rubber packing, strip rubber, canvas and rubber hose, water buckets, drinking glasses, file brushes, napkins and Turkish towels.—Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 o'clock, A. M., November 20, 1922, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this Circular (1502) may be obtained from this office, or the offices of the assistant purchasing agents, 24 State Street, New York City, and 611 Gravier Street, New Orleans, La.; also from the United States engineer offices in the principal cities throughout the United States.—A. L. Flint, General Purchasing Officer.

Bids close November 20, 1922.

U. S. ENGINEER OFFICE, HUNTINGTON, W. VA., October 20, 1922.—Sealed proposals will be received here until 11 a. m. (Eastern time), November 20, 1922, and then opened, for furnishing and delivering horses and props for Ohio River Dam No. 32. Further information on application.

Bids close November 27, 1922.

U. S. Engineer Office, Jacksonville, Fla.—Sealed proposals will be received here until 12 M., November 27, 1922, and then opened, for dredging in Key West Harbor, Fla. Further information on application.

Bids close December 1, 1922.

Proposal for Steel Barge.—U. S. Engineer office, Montgomery, Ala. Sealed proposals will be received here until 11 A. M., December 1, 1922, and then opened, for one 80-ft.x26-ft.x5-ft. steel barge. Further information on application.

Bids close December 2, 1922.

PROPOSALS FOR MACHINERY FOR HYDRAULIC GRADER.—Office, Mississippi River Commission, 1st and 2nd Districts, Customhouse, Memphis, Tenn.—Sealed proposals will be received here until 11 a. m., December 2, 1922, and then opened, for furnishing turbines, pumps, feed-water heater, boiler-feed pumps, and electric-light plant. Further information on application.

Bids close December 2, 1922.

PROPOSALS FOR STEEL BARGES.—Office Mississippi River Commission, 1st and 2nd Districts, Customhouse, Memphis, Tenn.—Sealed proposals will be received here until 11 a. m., December 2, 1922, and then opened, for furnishing six steel barges. Further information on application.

Bids close December 2, 1922.

PROPOSALS FOR BOILERS.—Office, Mississippi River Commission, 1st and 2nd Districts, Memphis, Tenn.—Sealed proposals will be received here until 11 a. m., December 2, 1922, and then opened, for furnishing boilers for hydraulic grader No. H. G. 2-1-2-23. Further information on application.

Bids close November 25, 1922.

\$65,000 6% Sewerage Bonds

Clover, S. C.
 The Town of Clover asks for bids on \$65,000 Sewerage Bonds, six per cent, annually, maturing 20-40 years. Bids will be received up until noon, November 25, 1922. All bids must be filed with V. Q. Hambright, Clerk of the Council, at Clover, S. C., on prescribed forms, on or before that date and hour. For information and form of bids, address Jno. R. Hart, Attorney, York, S. C. The right to reject any or all bids is reserved.

V. Q. HAMBRIGHT,
 Clerk of Council.

Bids close November 28, 1922.

\$350,000 5% Bonds

Font Smith, Ark.
The Board of Improvement of Fort Smith Water Works District of Fort Smith, Arkansas, will sell to the highest bidder, \$350,000 or more of 5% bonds of said district on the 28th day of November, 1922 at 2:30 P. M.

For further information, address Fagan Bourland, Chairman, Fort Smith Water Works District.

Bids close December 4, 1922.

Notice to Architects and Engineers

Vicksburg, Miss.
Sealed proposals will be received at a meeting of the Mayor and Aldermen of the City of Vicksburg, Miss., to be held at the City Hall in said City, at 4 o'clock P. M. on Monday, December 4, 1922, for plans and specifications for the erection of two public school buildings.

All information and details of the proposed buildings and the number of pupils to be accommodated may be had upon application to S. S. Patterson, City Clerk of said City.

The City reserves the right to reject any and all bids that may be submitted.
J. J. Hayes, Mayor.

Bids close November 14, 1922.

Road Improvements

OFFICE OF STATE ROAD DEPARTMENT

Tallahassee, Fla.

October 26, 1922.

Sealed proposals will be received at this office up to 12 o'clock M., Tuesday, November 14, 1922, for constructing or improving a section of Road No. 1, between Lake City and Wellborn in Columbia and Suwannee Counties.

The length of the road to be constructed or improved is approximately 11.6 miles and alternate proposals are desired on the following types of paving:

2½-in. Penetration Macadam on 6-in. Rock Base.

6-in., 8-in., 6-in. Plain Concrete Surface.

2-in. Bituminous Concrete (Topeka Type) with no binder course on 6-in. Rock Base.

1½-in. Sheet Asphalt with 1-in. Binder Course on 6-in. Rock Base.

A certified check, or a bidder's bond executed on the attached form in the sum of \$12,000, and made payable to the Chairman of the State Road Department must accompany each proposal.

Plans and specifications are on file and may be examined at this office and at the Office of the Division Engineer, Lake City, Fla., and may be secured on application to this office for the sum of Three (\$3.00) Dollars.

The right is reserved to reject any and all bids.

WM. F. COCKE, H. B. PHILIPS,
State Highway Engineer. Chairman.

Bids close November 14, 1922.

Road Improvements

OFFICE OF

STATE ROAD DEPARTMENT

Tallahassee, Fla., October 30, 1922.

Sealed proposals will be received at this office up to 12 o'clock noon, November 14, 1922, for constructing or improving the following sections of roads:

F. A. Project No. 34, being a portion of Road No. 7, approximately 10.0 miles in length, in Escambia County.

F. A. Project No. 36, being a portion of Road No. 4, approximately 7.76 miles in length, in St. Lucie County.

The work on each project consists of grade, drainage and paving and alternate proposals are desired on the following types of paving:

3-in. Penetration Macadam on 8-in. Rock Base.

3-in. Asphalt with Binder Course on 8-in. Rock Base.

6-in., 8-in., 6-in. Plain Concrete Surface.

A certified check or bidder's bond in the sum of \$15,000.00 for Project No. 34 and \$12,000.00 for Project No. 36, made payable to the Chairman of the State Road Department, must accompany each proposal.

Plans and specifications are on file and may be examined at this office, at the office of the County Engineer, Pensacola, Fla., and at the office of the Division Engineer, Fort Pierce, Fla., and may be secured on application to this office for the sum of Five (\$5.00) Dollars.

The right is reserved to reject any and all bids.

W. F. COCKE, H. B. PHILIPS,
State Highway Engineer. Chairman.

Bids close November 21, 1922.

Sewer Construction

Letting No. 6

Louisville, Ky.

Sealed proposals will be received by the Commissioners of Sewerage of Louisville until 12 o'clock noon, November 21, 1922, for the following sewer construction in Louisville, Ky., according to drawings and specifications now on file in the office of the Commission:

Approximate quantities are as follows:
PAYNE STREET SEWER (combined sewer)
The Sewer—520 lin. ft. of 24-in., 580 lin. ft. of 21-in., 410 lin. ft. of 18-in., 380 lin. ft. of 15-in., and 20 lin. ft. of 10-in. Alternate bids are invited on vitrified clay, and cement concrete pipe.

SPEED AVENUE LATERALS NORTH (separate system)
The Drain—410 lin. ft. of 30-in., 780 lin. ft. of 24-in., 430 lin. ft. of 21-in., 450 lin. ft. of 18-in., and 330 lin. ft. of 15-in.
The Sewer—2250 lin. ft. of 8-in.

Alternate bids are invited on vitrified clay pipe, cement concrete pipe, and monolithic concrete, for the 30-in. drain; and on vitrified clay pipe and cement concrete pipe for the sizes less than 30-in.

Drawings, form of proposal, contract and specifications may be obtained from the office of the Commission upon the deposit of ten (\$10.00) dollars each, to secure the return of same in good condition before December 10, 1922.

Each proposal must be enclosed in a sealed envelope addressed to the Commission of Sewerage, 417 West Main Street, Louisville, Ky., and accompanied by a certified check drawn upon a State or National bank or a trust company established in the City of Louisville or the City of New York for an amount not less than seven (7) per cent of the total amount of the accompanying proposal, payable to the Commissioners of Sewerage of Louisville, or the bond executed as set forth in the information for bidders.

The Commission reserves the right to reject any or all proposals.

COMMISSIONERS OF SEWERAGE

OF LOUISVILLE

By: OSCAR FENLEY,

Vice-Chairman.

P. H. HOGE, JR.,

Secretary and Treasurer.

J. B. F. BREED,

Chief Engineer.

Bids close November 27, 1922.

Road Construction

Washington, N. C.

Sealed proposals will be received by the Beaufort County Road Commission at its office in Washington, N. C., until 2:00 P. M., November 27, 1922, for the construction of two sections of road on the Chocowinity-Aurora Road. One section starting at Chocowinity and extending 4.8 miles towards Aurora; one section at Edwards being 2 miles in length.

Bids are desired on asphalt and concrete paving 15 feet wide.

The total estimated approximate quantities are:

71,800 sq. yds. of sheet asphalt, asphalt concrete or concrete paving.

452 sq. yds. gravel or waterbound macadam paving.

34,895 cu. yds. excavation.

3 culverts, containing 54 cu. yds. concrete and 4250 lbs. steel.

2 bridges, containing 706 cu. yds. concrete; 69,240 lbs. steel and 3200 feet of piling.

210 ft. 18-in. pipe.

30 ft. 30-in. pipe.

150 ft. 15-in. pipe.

Proposals must be marked "Proposal for Chocowinity-Aurora Road."

All bids must be upon blank forms provided in the proposal, contract and specifications.

Each bid must be accompanied by a certified check for \$10,000, or satisfactory bidder's bond as evidence of good faith. Bidders bidding on any part of the work separately must accompany their bid by a certified check or satisfactory bidder's bond for an amount equal to 5% of the amount of their bid.

Plans and specifications will be on file at the office of the Commission, in Washington, N. C., and copies of the plans specifications, form of proposal, etc. will be mailed upon the applicant making a deposit of \$5.00, one-half of which will be returned upon the return of the plans in good condition as stated in the specifications.

The right is reserved to reject any or all bids.

F. C. KUGLER, Chairman.
J. D. BULLUCK, Secretary.

H. W. RANKIN,
Engineer.

Water Works

Elkton, Va.

Elkton, Va. is contemplating installing water system to cost \$75,000; will be glad to hear from any one interested.

C. W. McGuire, Prest.

Bids close November 21, 1922.

Water Works and Sewerage Systems

Covington, La.

All bids having been rejected on the above work, new proposals will be received until Tuesday, November 21, 1922, at 7:30 P. M., for furnishing and laying approximately 11 miles Water Lines, and 10 miles of Sanitary Sewers and Appurtenances. Specifications, form of proposal, contract and plans may be seen at the office of the Mayor of Covington, La., or will be mailed upon application to the Engineers, The Kramer Engineering Company, Magnolia, Miss., upon a deposit of \$15.00 to insure their safe return.

The Council reserves the right to reject any and all bids, or to waive formalities, and to make any award which in their opinion is to the best interest of the Town of Covington.

ROBERT W. BADON, Mayor,
L. A. PERREAND, Secretary,
THE KRAMER ENGINEERING CO.,
Consulting Engineers,
Magnolia, Miss.

Bids close November 29, 1922.

Water Works Improvements

Bay St. Louis, Miss.

The Mayor and Board of Aldermen of the City of Bay St. Louis, Miss., will receive bids at the City Hall, until Two O'Clock P. M., Wednesday, November 29, 1922, for material and labor necessary in the building of the Water Works Improvements.

Approximately the following equipment and material will be required:

Two (2) 750 G. P. M. Motor-driven centrifugal Fire Pumps.

One (1) 75,000 Gallon Steel Tank and Tower.

One (1) 125,000 Gallon Concrete Reservoir.

3000 Feet of 8" Cast Iron Pipe.

5000 Feet of 6" Cast Iron Pipe.

26,000 Feet of 4" Cast Iron Pipe.

Sundry Hydrants, Valves, Fittings, etc.

Labor laying pipe and general construction.

Plans and specifications will be on file at the office of the City Clerk, Bay St. Louis, Miss., and at the office of the Engineers. All bids must be submitted on blanks for that purpose furnished with the specifications. Plans, specifications and bid sheet can be obtained from the Engineers, Swanson-McGraw, Inc., 705 United Fruit Building, New Orleans, La., by depositing Ten (\$10.00) Dollars, which deposit will be returned to bona fide bidders, or if the specifications are returned to the Engineers prior to the date of the letting.

Each bid must be accompanied by a certified check (bidder's bond not acceptable) in amount of five (5%) per cent of the amount bid, but in no event shall check be in less amount than Fifty (\$50.00) Dollars as evidence of good faith.

The right is reserved to reject any or all bids, waive any or all formalities, or accept any bid or bids which in the opinion of the Board appear to be to the best interest of the City.

R. W. WEBB, Mayor,
SYLVAN J. LADNER, Clerk,
SWANSON-McGRAW, INC.,
Consulting Engineers,
705 United Fruit Building,
New Orleans, La.

Bids close November 21, 1922.

Repainting Bridge

Pine Bluff, Ark.

Sealed proposals for repainting Free Bridge across Arkansas River near Pine Bluff, Ark., will be received by Commissioners until 3 P. M., Tuesday, November 21, 1922, at the office of Parkes Engineering Company, Citizens Bank Building, Pine Bluff, Ark.

Bridge is 1600 feet long and contains approximately 3200 tons of steel.

For further information address Parkes Engineering Company.

(Signed) W. N. TRULOCK,
C. H. TRIPLETT, JR.,
H. C. McGAUGHEY,
Commissioners.

Bids close December 12, 1922.

Bridges and Fills

Brunswick, Ga.
Sealed proposals will be received by the St. Simon's Highway Commission at the office of the County Commissioners of Glynn County in the Court House, Brunswick, Ga., until 11 A. M., on December 12, 1922, for furnishing all equipment, materials, labor and other things necessary for the construction of the bridges and fills from the mainland to St. Simons Island.

The project consists of 14,394 Lin. Ft. of earth embankment and 4646 Lin. Ft. of bridges. The work has been divided into four contracts, as follows:

CONTRACT NO. 1.

1. Clearing (Lump sum).
2. 128,011 Cu. Yds. of embankment above marsh.

CONTRACT NO. 2.

1. 66,000 Lin. Ft. creosoted wood piling.
2. 420,000 Ft. B. M. creosoted timber.
3. 251,000 Ft. B. M. creosoted wood flooring.
4. 1,200 Sq. Yds. Stone rip rap 12" thick.
5. 2 40-Foot steel beam spans erected complete.

Piers Alternate No. 1.

6. 1,460 Cu. Yds. Class "A" Concrete.
7. 10,200 Lbs. Steel reinforcing.
8. 7,000 Lin. Ft. untreated wood piling.

Piers Alternate No. 2.

9. 135,000 Ft. B. M. creosoted timber.
10. 9,200 Lin. Ft. creosoted wood piling.

CONTRACT NO. 3.

1. 2 208-Foot steel swing spans complete (except floor).

CONTRACT NO. 4.

1. 4,800 Cu. Yds. Clay gravel surfacing (compacted).

Work on contracts Nos. 1 and 2 shall begin within two weeks after approval of contracts. The contracts shall be completed, as follows:

- No. 1—November 15, 1923.
- No. 2—November 30, 1923.
- No. 3—November 10, 1923.

Work will be in charge of the State Highway Engineer and will be paid for as it progresses, to wit: 50% of the amount done each month will be paid on or before the 10th of the succeeding month and the remaining 10% will be paid within 30 days after final completion and acceptance.

Proposals must be submitted on regular forms which will be supplied by the State Highway Engineer and must be accompanied by a certified check or bidder's bond for \$5000 on contracts Nos. 1 and 2, and for \$2000 on contracts Nos. 3 and 4. Bond will be required of the successful bidder.

Plans and specifications are on file in the office of the State Highway Engineer at Atlanta, Ga. and the office of the County Commissioners at Brunswick, Ga. Copies can be obtained from the State Highway Engineer upon receipt of \$10.00 to cover cost of blueprinting.

The right is reserved to reject any and all bids and to waive all formalities.

ST. SIMONS HIGHWAY COMMISSION.

Bids close November 22, 1922.

Construction of Ashland Bridge and Approaches Over the Western Run.

WATER DEPARTMENT

Baltimore, Md.

Sealed proposals, in duplicate, endorsed, "Bids for Constructing the Ashland Bridge and Approaches over Western Run, Baltimore County, Md., Contract No. 62, Water Department," addressed to the Board of Awards of Baltimore City, will be received at the office of the City Register, City Hall, Baltimore, Md., until 11 A. M., Wednesday, November 22, 1922, at which time they will be publicly opened and read.

Plans and specifications may be obtained at the office of the Water Engineer, City Hall, Baltimore, Md., on or after November 11, 1922. A charge of twenty-five (\$25) dollars will be made for each set of plans and specifications; this amount will be refunded upon the return of these plans and specifications before November 29, 1922, in good condition. Specifications used in making a bid will be considered as returned. Additional blueprints will be furnished the prospective bidders only upon written request, at 25 cents each, which amount will not be refunded. A certified check of the bidder on a clearing house bank, made payable to the Mayor and City Council of Baltimore, for the sum of Three Thousand (\$3000) Dollars, will be required with each bid.

The work includes the construction of a bridge of one 90-ft. steel span with reinforced concrete abutments and approaches, total length 910 feet.

Total excavation about 6700 cubic yards. The successful bidder will be required to give bond equal in amount to the value of the contract to comply with the City Charter respecting contracts.

The Board of Awards reserves the right to reject any or all bids.

APPROVED:

(Signed) WM. A. MEGRAW,
Water Engineer.

Bids close November 27, 1922.

12,000,000 Gallon Pumping Engine

OFFICE DIRECTOR OF PUBLIC WORKS

Norfolk, Va.

Sealed proposals will be received at the Office of the Director of Public Works, City of Norfolk, Va., until 12:00 o'clock noon on the 27th day of November, 1922, for one 12,000,000 Gallon Horizontal, Cross Compound, Crank and Fly Wheel, Condensing Pumping Engine of the double opposed type.

Instructions to Bidders, Form of Proposal, Specifications, Contract and Form of Bond may be inspected, at the Office of the Director of Public Works, Norfolk, Va., or at the office of the Consulting Engineer, Dabney H. Maury, 1445 Monadnock Block, Chicago, Ill., and a complete set of all of the above papers may be obtained by intending bidders either from the Director of Public Works or from the Consulting Engineer, upon application accompanied by a check or Postal Order for Fifteen (\$15.00) Dollars, payable to B. Gray Tunstall, City Treasurer, which amount will be refunded to the party depositing it on the return of all of the foregoing papers in good order.

A certified check on an approved bank either in the City of Norfolk, or in the City of New York, or in the City of Chicago, in the sum of Five Hundred (\$500.00) Dollars, and payable to B. Gray Tunstall, City Treasurer, must accompany each bid, subject to the conditions expressed in the Instructions to Bidders and Form of Proposal.

The City of Norfolk reserves the right to reject any or all bids.

WALTER H. TAYLOR, 3rd,
Director of Public Works.

Bids close November 16, 1922.

Structural Steel Shed

New Orleans, La.

Sealed proposals will be received by the Board of Commissioners of the Port of New Orleans at their office, Suite 200, New Court Building, until 3:00 P. M., November 16, 1922, and then publicly opened for furnishing, erecting and painting of the structural steel required for the Seventh Street Shed.

A deposit of \$1000.00 in cash or certified check is required with each proposal.

A bond to the amount of 50% of the sum bid is required with notarial contract.

Specifications and proposal forms are on file in the office of the Supervisor of Purchases at No. 1 Canal Street, New Orleans, La. Complete sets will be furnished to prospective bidders on deposit of \$5.00, which will be refunded to depositors who submit proposals, or return sets in good condition.

The right is reserved to reject any or all bids and to waive informalities.

J. H. WALSH,
General Manager.



CLASSIFIED OPPORTUNITIES

MINERAL AND TIMBER LANDS WATER POWERS, MISCELLANEOUS PROPERTIES

Wealth in virgin coal fields in Northern Alabama, near Tennessee River. Ready to mine with electric equipment; entries driven. Superior domestic, steam and gas coal; unsurpassed in the South as an export coal. Iron ore, fire-clay, cement rock and limestone in vast quantities. Five million feet of Poplar, Oak and Hickory timber on property. Industrial railroad connecting with Southern Ry. system. Soil overlying 16,000 acres, ideal for cattle, sheep and Angora goats and for fruit raising. For full particulars, price and terms, write F. D. Pierce, 1505 E. Genesee St., Syracuse, N. Y.

FOR SALE—84 acres, 50 acres nice timber; good hunting and fishing. Large stone blint on C. & O. R. R. and State Highway. Analysis and sample of stone furnished. Postmaster, Irwin, Va.

COAL LANDS AND MINES

FOR SALE—Going coal mines—coal, oil and gas lands—timber tracts. Reports made on same anywhere. E. H. Morris, Box 518, Charleston, W. Va.

RATES AND CONDITIONS

Rate 30 cents per line per insertion. Minimum space accepted, four lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assurance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, oil or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 28c. per line; 300 lines, 26c. per line; 500 lines or more, 25c. per line.

COAL LANDS AND MINES

FOR SALE—Arkansas Coal Property. Two going mines, one steam and electrically equipped, with production of 350 to 400 tons daily. Can be put to 700 tons with present equipment. 200 acres favorable lease, 100 acres fee. 45-inch seam with dirt band for machine mining. Analysis 14640 B. T. U. Address No. 6089 Manufacturers Record, Baltimore, Md.

TIMBER

YELLOW FIR TIMBER—FOR SALE 300,000 feet yellow fir, key to a very much larger tract. The timber is as fine as there is on the coast and in a solid body, standing on 4000 acres. No deep canyons—long, gradual slopes. Location: Lane County, Oregon. \$150 per M. Address G. THEDEN, 1034 Security Bldg., Minneapolis, Minnesota.

TIMBER FOR SALE

I have a Georgia proposition direct from the owner, which contains 8,000,000 feet of pine; 4,000,000 to 5,000,000 feet of cypress and 8,000,000 to 10,000,000 feet of other hardwoods. Price \$4 per M. Railroad runs through property. Address for particulars—

JOHN W. DICKEY,

Augusta, Ga.

MANGANESE PROPERTY

I have a large tract of Manganese Ore, this is a vein ore, not pocket, 1150 acres, and as duty on Manganese ore from foreign countries is \$12.00 per ton, good opportunity for parties interested. J. E. Hill, 1212 North 12 Court, Birmingham, Ala.

LIME DEPOSIT

LIME—Large deposit near R. R.; high-grade; suitable for all purposes. Prefer leasing; would sell. W. M. Shockley, Lowell, Fla.

FARM, FRUIT, AND TRUCK LANDS**ALABAMA**

WESTWYN PLANTATION
Near Selma, in Dallas County, Alabama. The prettiest, most up-to-date place in the county. Write for particulars and pictures. Eight Hundred acres.
Dallas County Real Estate Co., Selma, Ala.

FLORIDA

FLORIDA—Come to Florida, "where its summertime in the wintertime, and pleasant all the year round;" no coal bills; no wintry ice or snow—just sunshine, and health and opportunity. Send for booklet, "Largest Orange Tree in the World," and list of homes, groves and farms. Tampa-West Coast Realty Co. (Inc.) opposite Post Office Since before the War," Tampa, Fla.

SOUTH CAROLINA

Truck farms that pay dividends annually can be bought at reasonable prices here. Vegetables are shipped eight months in the year. Three and four crops are grown on the same land annually. Excellent climate and health. Plenty of labor; strikes unknown. Well organized association that sells all farm products. For particulars write. Lake Realty Company, Beaufort, S.C.

TEXAS

20,000 acres level black land, all tillable, three miles from station on railroad, adjoining land nearly all in cultivation, abundant artesian water 600 to 800 feet, worth \$40 per acre in 40-acre tracts, form a company and re-sell, our price \$15 per acre net. **RANCHES**; 9600 acres, improved Duval Co., \$9.00 per acre. 10,200 acres Live Oak Co., three houses and barns, \$12.00 41,000 acres on Brooks and Hadalo line, near King of Trails Highway, \$7.00 per acre. 100,000 acres Terrell Co., lots of water, several houses, \$9.65 per acre, will divide. Write for full description. **GRUBBS REALTY CO., CORPUS CHRISTI, TEX.**

BUSINESS OPPORTUNITIES

I **SPECIALIZE** in industrial, warehouse and business sites at and adjacent to Washington, D. C.

M. B. HARLOW,
Harlow Building, Colorado Building,
Alexandria, Va. Washington, D. C.

Interest open in Marine Transportation and Commission Company. Business enough from South to earn \$300,000 Net Annually. 25% on capital invested. Alfred S. Perry, Perry Building, Fairfield, Conn.

Retiring manufacturing chemist, 20 years experience, has for sale formulas for line Toilet Preparations, Perfumes, Flavoring Extracts and Medicinal Preparations second to none. Several specialties not made by any other houses. Will sell part of all formulas. Would establish laboratories. Samples submitted. Address Chemist, 701 James Building, Chattanooga, Tenn.

CAPITAL WANTED—To develop West Texas Property, producing most beautiful product for its purpose in world. Large domestic and export market. Will pay 100% on half million capitalization. Will stand most rigid examination. Requires \$350,000 cash to handle. W. R. Power, City Bank Building, Mobile, Ala.

MIAMI, FLORIDA

The fastest growing city in the U. S. A.! Four million acres richest land. Building million dollar sugar refinery. Excellent investment opportunities, big profits and safety here.

Ask for information and literature.
DAVENPORT & RICH, REALTORS
MIAMI, FLORIDA.

Contractor with good financial connection will assist to promote and build industrial or railroad proposition of unquestionable merit. Address No. 6088 care Manufacturers Record, Baltimore, Md.

BUSINESS OPPORTUNITIES

If interested in the
BEST SECTION OF THE SOUTH
If you want a Cotton Mill,
or Southern Mill Stocks
or Investment in Central Real Estate
or Large Suburban Development property
or a Manufacturing Site
Address
F. C. ABBOTT & COMPANY
Trust Building, Charlotte, N. C.

FINANCIAL

The Fraudulent gold basis "Federal Reserve Act" destroys the control of our Government over its money system and is a ruinous betrayal of the people by Congress. Read its exposure and the Remedy in "Democracy vs. Plutocracy," by T. Cushing Daniel. Popular Edition, 25 cents. The Monetary Educational Bureau, 1416 F St., Washington, D. C.

INDUSTRIAL FINANCING—Will finance going corporations, and organize or reorganize, or sell outright large properties, mills, timber and mineral lands, etc. Will deal only direct with owner and only on my own terms. If you have real business and mean business and want to try something entirely different from usual brokerage methods, write me the facts. If I undertake it, I will see it through, quietly, but surely. No small transactions. No speculation. Address Bruce Craven, Trinity, N. C.

COLLECTIONS

COLLECTIONS
MERRIAM
507 FIFTH AVENUE,
NEW YORK CITY

INDUSTRIES WANTED

CENTRAL NEW YORK
Railroad company offers several large factory buildings together with nine dwelling houses for sale or lease. Suitable for textile, shoe, automobile, farm implement or other similar industries. Cheap electric power. Address General Manager, **SOUTHERN NEW YORK POWER & RAILWAY CORPORATION**, Oneonta, N. Y.

FACTORY SITES**BALTIMORE****FACTORY****SITES**

William Martien & Company,
1413 Lexington Bldg.,
Baltimore, Md.

FACTORY SITE

One mile east of Petersburg, Va., 25 acres bounded on north by Appomattox River; on south by the Norfolk & Western Railway, Concrete Highway and Electric Car Line. Good river frontage and is within N. & W. freight yard limits. Convenient for rail on water shipments. Quantity of sand and gravel. Good buildings. Electric light. Street car stop at property. Low taxes. Write E. W. Tylar, Box 61, Hopewell, Va.

NEW ORLEANS HARBOR

Ideal Factory Site.
192 foot river frontage water rights.
Two railroads.
A. B. Graves Realty Co.,
409 Marine Bank Building,
New Orleans, La.

PATENT ATTORNEYS

PATENT-SENSE.
"The Book for Inventors
and Manufacturers."
FRED. WHITE
LACEY & LACEY,
Dept. 15. Washington, D. C. Est. 1869.

PATENT ATTORNEYS

INVENTORS—Send sketch or model of your invention, for opinion concerning patentable nature, and exact cost of applying for patent. Book, "How to Obtain a Patent" sent free. Gives information on patent procedure and tells what every inventor should know. Established 25 years. Chandler & Chandler, 412 7th St. N.W. Washington, D. C.

PATENTS—Booklet free. Highest references. Best results. Promptness assured. **Watson E. Coleman, Patent Lawyer, 624 F St., Washington, D. C.**

PATENTS, TRADE-MARKS AND COPYRIGHTS—Write for our Free Illustrated Guide Book and **EVIDENCE OF CONCEPTION BLANK**. Send model or sketch and description of your invention for our opinion of its patentable nature free. Highest references. Prompt service. Reasonable terms. **Victor J. Evans & Co., 712 9th St., Washington, D. C.**

LUMBER AND BUILDING MATERIAL**FOR SALE**

1 Car $\frac{3}{4}$ x 3-2 $\frac{1}{4}$ " Face B. & Btr. Ceiling.
1 Car $\frac{3}{4}$ x 3-2 $\frac{1}{4}$ " Face No. 1 Com. Ceiling.
4 $\frac{1}{2}$ Cars $\frac{3}{4}$ x 3-2 $\frac{1}{4}$ " Face No. 2 Com. Ceiling.
2 Cars 32" No. 1 Kiln Dried Plaster Lath.
4 Cars 32" No. 2 Kiln Dried Plaster Lath.
Ingram-Day Lumber Co., Lyman, Miss.

SITUATIONS WANTED

Traffic Manager—Industrial—open for position. Especially versed in lumber trade—thoroughly familiar in other commodities. References. Address No. 6086 care Manufacturers Record, Baltimore, Md.

Young, energetic, capable man with rail, way and industrial traffic experience, graduate traffic school, 10 years general office experience and good accountant, desires change and solicits correspondence. No. 6090 care Manufacturers Record, Balto., Md.

MEN WANTED

WANTED—By a cash and door jobbing house with manufacturing connection, a high-grade salesman for North Carolina and Virginia. Address 6085 care Manufacturers Record, Baltimore, Md.

A **LEADING ORGANIZATION** desiring to fill an important position, for obvious ethical and other reasons, cannot invite directly the candidacy of any particular man. Similarly, no well-connected man will exploit personally his own qualifications, no matter how receptive he may be to overtures. The undersigned has been retained by a national clientele for many years, as a medium for negotiating preliminaries in such cases. Your permission to send booklet discussing this problem and describing the service, will in no degree obligate or compromise you. Strictly confidential. **R. W. Bixby Inc., 303 Lockwood Bldg., Buffalo, N. Y.**

Wanted Salesmen—Refrigerating salesmen to work in exclusive territory on percentage basis. Must be able to furnish good reference, and would prefer financing own expense account. De Loach Quick Ice Machine Co., Columbia, S. C.

MACHINERY AND SUPPLIES

Valves, pipe fittings, all kinds and sizes; new stock. Can positively save you money on quantity purchases. What are your requirements? **Pratt Thompson, 220 E. Lexington St., Baltimore, Md.**

TRACTORS—We are offering at reduced prices several Cletrac Model W Crawler type tractors. These tractors are new and have never been used. **Speer & Watkins, Anderson, S. C.**

MACHINERY AND SUPPLIES WANTED**OIL ENGINES WANTED**

Catalogues and approximate prices; also cost of operating oil engines, for connection to alternating current generators; 100 to 150 H. P. **MARION COUNTRY ICE COMPANY, Ocala, Fla.**

SPECIAL ADVERTISEMENTS OF GENERAL INTEREST

Owners of Subdivisions Farm or Acreage. Anywhere in the United States.

I organize Sales Forces and turn property into quick cash.
What have you to sell now or for spring?

Eff Perry Butler, Land Developer
Belair Court, Atlantic City, N. J.

Selling this winter in Miami and St. Petersburg, Fla.

For Sale

Hydro-Electric Plant—Bargain

Located in Georgia on two Trunk Line Railroads. Developing 300 H.P. complete with generators transmission lines, etc. Present income from sale of power about \$6000.00. By raising Dam 12 feet can be made to realize \$15,000.00 per year. Offered for quick sale at \$35,000.00 half cash balance in one to three years. Excellent location for cotton mill.

T. D. Hoskins, Boaz, Ala.

FOR SALE 20,000 ACRES OF COAL

eight miles from main line of N & W R'Way. Carries five seams, 34" to 86" in thickness, 100 openings on tract.

Average analyses for the five seams, from 18 analyses made.

Moisture	Volatile	Carbon	Ash	Sulphur
2.08	31.5	60.5	5.	.92

For full information write,

G. H. SLUSS

175 Union Street

Bluefield, W. Va.

Plant Sites For Sale in the Birmingham District

HYDRO-ELECTRIC POWER
EQUABLE CLIMATE

Sites to suit all needs on all railroads. Supplies of coal, coke, iron and steel within trucking distance.

Labor situation better than in other industrial centers. Hydro-electric power available. Equable climate.

Address

BIRMINGHAM REALTY CO.

Owners

BIRMINGHAM, ALA.



OPPORTUNITIES

Industrial and Agricultural

The A. & W. P.—W. Ry. of Alabama and Georgia Railroads traverse a territory rich in material and potential resources. Attractive industrial sites. For information apply:

**Commercial & Agricultural
Dev. Dept.—Above Lines
Atlanta, Georgia**

BUSINESS OPPORTUNITY FOR SALE

Controlling interest in a well established Saw Mill Machinery Contractors Equipment and Oil Field Boiler Business. Located in one of the best sections of the South.

Sales over \$20,000.00 first part of month. Purchaser must understand the business and be capable of taking charge; must have \$25,000 cash. Give details as to ability, etc., first letter. All communications held strictly confidential.

**Address A-274 Manufacturers Record
BALTIMORE MARYLAND**

To the MANUFACTURER and DISTRIBUTOR

Abundant supplies of coal, coke, iron, timber and other raw materials lie in the regions of Georgia and Alabama, which are traversed by the

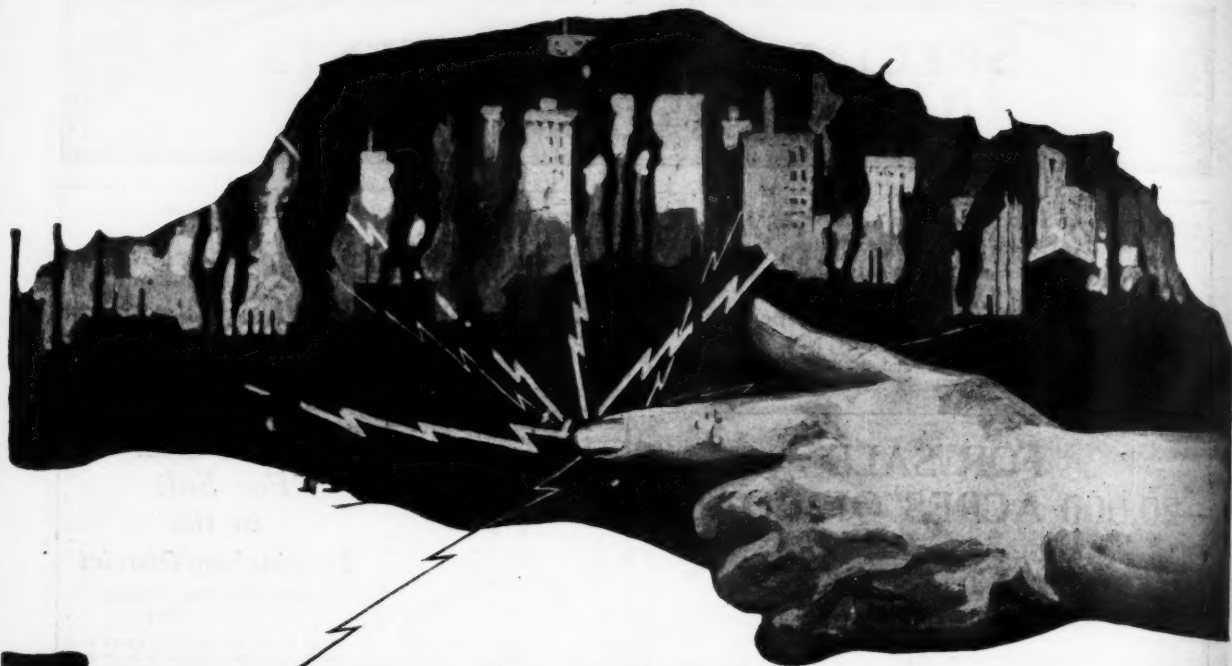
Central of Georgia Railway

Cheap electric power, numerous undeveloped water-powers, good home markets and excellent shipping facilities. Therefore, manufacturing conditions are ideal.

Many of the cities on the Central of Georgia Railway occupy advantageous positions for distributing warehouses, and a number of the larger northern and eastern manufacturers supply their southeastern trade from branch houses in these cities.

Full and detailed information upon application.

**J. M. MALLORY, General Industrial Agent
SAVANNAH, GEORGIA**



LOUISVILLE

keeps her finger on the pulse of trade

The Louisville Industrial Foundation a public corporation with a capital of \$1,000,000 promotes the growth and development of factories. Ask us about location advantages.

LOUISVILLE is industrially balanced. Its prosperity does not depend on any particular industry or group of businesses. The market is complete—producing in competitive quantity, articles and commodities which enter into the social, commercial and industrial life of many nations. Louisville is not noticeably affected by business depressions in any single industry or group of lines as are markets less advantageously balanced. *

In addition to the diversified products of her factories, Louisville Jobbers, Wholesalers and Supply Houses assemble the best from the world's markets, for your convenience, and specialize in quick, reliable service.

Whether you are seeking a location for a factory, a distributing point for a product, or a convenient market to supply your wants—you will find it to your advantage to visit Louisville. Come in this month or write us for any information you wish.

MERCHANTS & MANUFACTURERS ASSN.
"Refunds Your Fare From Anywhere"

ROBERT H. KEER Secy

* The percentage of unemployment in Louisville during past periods of national business depression is noticeably less than that of any city of comparative size.



Jacksonville Florida

A Strategic Location for Manufacturing Plants

1. Population close to 100,000 and rapidly growing.
2. The logical distributing center for the southeast.
3. Serves a trading zone containing over 8,000,000 people.
4. Already an important and growing jobbing center.
5. A large and profitable home market.
6. Adequate fire and police protection.
7. Abundance of natural resources and raw materials.
8. Plentiful supply of good labor.
9. Climate, permitting outdoor work the year 'round.
10. Cheap electrical power from city owned plant.
11. Rail and water transportation.
12. Five trunk line railroads enter the city.
13. Five steamship lines; frequent sailings to European and South American ports.
14. More than ten miles of developed water front, and ample docking facilities.
15. Strong banking institutions, including branch of Federal Reserve Bank.
16. Local advantages that contribute to economical manufacturing.
17. City pure water supply, gas, electricity, modern sanitation, schools, churches, clubs, hospitals and recreation grounds.
18. Jacksonville is the city of industrial and commercial opportunity in the prosperous and fast developing southeastern section of the United States.

Booklet, "Factory Advantages of
Jacksonville," mailed upon request

CITY ADVERTISING DEPARTMENT
Room 11-M, City Hall, Jacksonville, Florida

JACKSONVILLE



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Afford wonderful opportunities for industrial development and the location of plants for distribution.

THE TEXAS AND PACIFIC RAILWAY maintains an Industrial Department fully equipped to furnish information regarding resources, values of property, rentals and other information helpful to prospective manufacturers or distributors.

Address

FRANK J. BURKE
Land & Industrial Commissioner
DALLAS, TEXAS

FOR SALE

We have purchased the Carolina Shipyard which is located at Wilmington, N. C. This tract of land offers a great opportunity for manufacturing purposes of most any kind of industry. It has a great water front of 1150 feet on Cape Fear River, bounded on the North by the Texas Oil Co.'s property. It has six miles of railroad track on property with all improvements, such as warehouse, office buildings, power house, water and fire system. We will sell at a very interesting price, all, or any part thereof for manufacturing or storage purposes. This plant has the finest water and rail facilities. We also have a number of other items to dispose of such as electric hoists, derricks, locomotives, railroad cars, locomotive cranes, pumps, 200 tons of 67½ lb. rail and a lot of different material too numerous to mention at a sacrifice price as this must be sold.

H. Klaff & Co.
Central Avenue & Gough Street
BALTIMORE, MD.

Name, Contracts and Equipment For Sale of Corporation doing Bridge Work

Have \$200,000.00 worth of contracts on hands, well equipped and in good location, would like to sell name, contracts and equipment.

Correspondence solicited from parties who have the money and are interested in this line of work.

Address A272, care Manufacturers Record
BALTIMORE, MARYLAND

Industrial Location

I will furnish two-story Building 30x60, Railroad Siding and Electric Current alongside, for an interest in a reliable manufacturing proposition. Location near Trenton, N. J.
Address

CHARLES T. EASTBURN
803 Broad St. Bank Building
Trenton, N. J.

MACHINERY AND EQUIPMENT WANTED

Freight Cars

We are in the market for all-steel or steel underframe freight cars of not less than 40 ton capacity.

E. H. WILSON & COMPANY
COMMERCIAL TRUST BUILDING
PHILADELPHIA

WANTED

The following second-hand machinery—must be in good condition.

- 1 Pony Planer.
- 1 Mortiser.
- 1 Tenoner.
- 1 Combination Rip and Cut-Off Saw.
- 1 Door and Sash Sticker.
- 1 Aren or Belt Sander.
- 1 Door Clamp.

VIRGINIA BUILDERS SUPPLY CO.
Newport News, Va.

WANTED

Several eighteen inch conveyor belts with troughing pulleys, take up and driving pulleys. State what you have to offer, giving full description of condition, location and lowest price spot cash.

ROPER-STRAUSS-FERST CO.
Birmingham, Ala.

ENGINE WANTED

Want to buy 125 H.P. Stationary Steam Engine, plain slide valve, or 100, 125 or 150 H.P. Corliss Make. Must be in absolute first-class order, guaranteed to run good as new. Address, giving full description as to make, etc.

Akers Lumber Company
Lynchburg, Va.

RESALE DEPARTMENT

MACHINERY

EQUIPMENT

SUPPLIES



Get in on this opportunity for new Steel Lockers

Sizes

12x12x60 inches
12x15x72 inches
15x15x72 inches
15x18x72 inches
18x18x72 inches

The supply is limited—and many are seizing the chance to install this handsome modern locker equipment at surprisingly low prices.

Better send in your inquiry now, and mention size and quantity.

NEW YORK MACHINERY CO.

Dept. MA-XXX

200 Fifth Ave., New York City

Your Products Exhibited

in the BUILDERS' EXCHANGE

BALTIMORE, MD.

Will give you results in actual business.

Exhibits

on ground floor

Write for information

MIXING TANK FOR SALE

One steel, glass lined mixing tank, open top, concave bottom, center agitator, belt driven, on legs; 7' 6" dia. by 3' 6" deep, cap. approx. 1300 gal. Also one copper steam jacketed cooker, 3 ft. dia. 2' 3" deep, cap. approx. 125 gal.

CHERO-COLA BOTTLING CO., Charleston, W. Va.

USED OIL ENGINES

20, 35, 40, 50, 60, 85, 100, 120, 140, 150, 200, 225, 280 and 500 H.P. used oil engines in good condition. Write for prices.

ROBERT P. KEHOE

7 East 42nd St., New York City

Telephone Vanderbilt 9595

TIMBER SIZER

1—No. 16, 26"x16" "P. B. Yates"

95% NEW

PRICED TO SELL

L. F. SEYFERT'S SONS, INC.

437 N. 3d St.,

Phila., Pa.

HOISTING ENGINES

Almost every size and for every duty. Steam, Electric and Gasoline.

STEAM PUMPS

18" x 10" x 12" Worthington 1000 gal. Fire Pump.

65-10" x 6" x 12" Buffalo Brand new, special price.

Many other sizes and makes.

COMPRESSORS

20 and 12 x 14 Chicago Pneumatic 1145 cu. ft.

22 and 14 x 18 Laidlow, Dunn and Gording 1200 cu. ft.

Many smaller ones.

BOILERS

Return Tubular, Vertical and Locomotive Type, nearly every size new and second-hand in Stock.

LOUIS A. TARR, INC.

N. W. Cor. Sharp & Conway Sts.

BALTIMORE, MD.

COMPLETE MINERAL GRINDING EQUIPMENT FOR SALE

3-40" Emery Mills, 2-Jaw Crushers, 3-Bolting Reels, 1-Sturtevant Boiler Mill, 2-Steam Engines, 1-Boiler.

CONSOLIDATED PRODUCTS COMPANY, Inc.

15 PARK ROW, NEW YORK CITY

WANTED TO PURCHASE FOR CASH

500 KW and 1500 KW condensing steam turbine complete—125 to 150 pounds gauge—2500 volt—60 cycle—3 phase. Might consider capacity in one unit. Must be in first-class shape and cheap.

P. O. Box 853 Seattle, Wash.

3-230 H. B. & W. Boilers 160 lbs. Complete with grates and fittings. \$8.00 per HP

f. o. b. cars Jacksonville, N. C.

PFANNMUELLER ENGINEERING CO.

305 First National Bank Bldg.

CHICAGO

No. 4

RYERSON FRICTION SAW

Practically New

Wm. Wharton, Jr. & Co., Inc.

P. O. Box 214

Easton, Pa.

NEW AND SECOND HAND MACHINERY FOR SALE

2-250 H.P. Heine Safety Boilers with fixtures.

1-125 H.P. High Pressure Locomotive type Boiler, 66 inch dia. 13 feet long over all, 199-3 inch flues 10 feet long. Fire box 4 ft. 10 in. wide by 5 ft. 0 in. long by 4 ft. 6 in. deep. 48 feet of 30 inch stack, all regular Catalogue fittings. Good for 150 lb. pressure.

The above have been used but are in A No. 1 condition.

1-30 H.P. Locomotive type Boiler, 50 inch dia., 31 feet long over all, 63-3 1/2 inch flues 14 feet long. Fire box 3 1/2 feet long by 4 feet deep by 4 feet wide. All Catalogue fittings including Stack, 125 lb. pressure. This is a New Boiler.

1-8 inch Centrifugal Dredge Pump with 200 feet of 8 inch spiral riveted galvanized pipe with elbows, rubber sleeve connections, suction hose, pulley shafting, clutches, winch heads, etc. This is a complete dredging outfit. New—Never been set up.

1-Hill Curtis Steam Drag Saw, Cylinder 8 inches by 5 feet. Saw 10 inches by 8 feet. New.

1-6 H.P. Fairbanks-Morse Single Drum Hoisting outfit. Gasoline Engine, magneto equipped. Good condition.

4000 feet of 1 inch 6x9 Monitor Logging Rope.

8000 feet of 3/4 inch Crucible cast steel Hoisting Rope. This is American Steel & Wire Co.'s Rope New.

1-32 inch by 6 inch Power Grind Stone with 24 inch by 6 inch pulley (mounted).

900,000 lbs. of 25, 30, 35, and 40 lb. Relay Rail, straightened, trimmed and drilled.

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R.P.M. complete with base, pulley and no voltage release
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lease Starters, from 5 to 100 H.P. Volts 220-440-550.
At Attractive Prices.**ANDREW I. MEHAN COMPANY**

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1—150 H.P. Hanover Engine.

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1—42x48" Jeffrey Bark Shredder.

1—No. 5 Williams Bark Shredder.

1—No. 3 Williams Bark Shredder.

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1—Forbes Pipe Threading Machine $2\frac{1}{2}$ to 6".

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- 1-5000 kw. General Electric Vertical, 3 phase, 60 cycle, 4500 volts, Turbo Generator Set, with Condenser and accessories.
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 - 1-600 K.W. General Electric, 3 phase, 60 cycle, 250 volt Generator, direct connected to an 18 x 42 x 36 Filer & Stowell Corliss Engine.
 - 1-500 K.W. Westinghouse, 3 phase, 60 cycle, 2300 volt Generator, direct connected to a 26x42 Hamilton Corliss Engine.
 - 1-350 K.W. Westinghouse, 3 phase, 60 cycle, 220 volt Generator, direct connected to a 26 x 42 Murray Corliss Engine.
 - 1-300 kw. General Electric, 3 phase, 60 cycle, 2300 volt Turbo Generator Set, Condensing.
 - 1-250 K.W. Westinghouse, 3-phase, 60-cycle, 220-volt alternator, direct connected to a 22 x 42 Murray heavy duty Corliss engine.
 - 1-250 K.V.A. Allis-Chalmers, 3 phase, 60 cycle, 2300 volts, 600 H.P.M., belted type Alternator.
 - 300 K.W. each, DeLaval-Bullock, 3 phase, 60 cycle, 220-440 volts Turbo Generator Sets, with condensers and accessories.
 - 1-125 K.V.A. Ft. Wayne, 3 phase, 60 cycle, 1150-2300 volts Generator, direct connected to a 15 x 16 Erie-Ball Automatic Engine, with accessories.
 - 1-100 kw. General Electric, 3 phase, 60 cycle, 220 volt, 3000 H.P.M., Turbo Generator Set with Condenser and accessories.
 - 1-62½ K.W. Lincoln, 3 phase, 60 cycle, 480 volt Generator, direct connected to an 11 x 13 Chandler & Taylor Automatic Engine.

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Built and Direct Connected.
- 1-510-K.W. Crocker-Wheeler, 300 volt, compound wound, Generator, direct connected to a 19 x 49 x 36 McIntosh & Seymour Engine.
 - 1-300-K.W. Triumph, 250-volts, compound wound generator, direct connected to a 15 x 28 x 30 Hamilton cross compound Corliss engine.
 - 1-250 K.W. Triumph, 125 volts, Generator, direct connected to a 23 x 20 Skinner Automatic Engine. (Can be rewound for 250 volts.)
 - 2-150 K.W. Westinghouse, 275 volts, 200 R.P.M. Generators, each direct connected to an 18 x 19 Fleming-Harrisburg Automatic Engine.
 - 1-125-K.W. Fort Wayne, 230-volts, compound wound generator, direct connected to a 17 x 16 Skinner automatic engine.

- 1-100 K.W. Triumph, 125 volt, 675 R.P.M., compound wound, belted type Generator.
- 1-75 K.W. Ft. Wayne, 250 volts, compound wound, Generator, direct connected to a Skinner Automatic Engine.
- 1-33½-K.W. Western Electric, 250-volts compound wound generator, direct connected to a 9 x 12 Skinner engine.
- 1-25 K.W. Triumph, 125 volt, compound wound, Generator, direct connected to a 9x12 Skinner Automatic Engine.
- 1-22½ K.W. Allis-Chalmers, 120 volt, 187.5 amps, 925 R.P.M., compound wound, belted type Generator
- 1-20 K.W. Western Electric, 1250 R.P.M., 120 volt, compound wound, belted type Generator.
- 1-17½ K.W. Triumph, 125 volt, 140 amperes, 250 R.P.M., compound wound, belted type Generator.

- BOILERS**
- 6-1040 H.P. Edgemore, ASME Code, 200 lb. pressure
 - 2-520 H.P. Stirling, 175 lb. pressure.
 - 3-250 H.P. Franklin Heine type, 150-lb. pressure.
 - 3-207 H.P. Geary, Heine type, 175 lb. pressure.
 - 2-175 H.P. Atlas, 150-lb. pressure.
 - 1-175 H.P. 72x18, high pressure, H. R. T.
 - 4-150 H.P. 72x18 high pressure H. R. T.
 - 5-125 H.P. 72x18 high pressure H. R. T.
 - 2-100 H.P. 60x16 high pressure H. R. T.
 - 2-100 H.P. 60x16, Standard, H. R. T.
 - 1-80 H.P. 60x16 high pressure H. R. T.
 - 1-80 H.P. 54x14 high pressure H. R. T.
 - 1-50 H.P. 48x120, high pressure, Vertical.
 - 1-75 H.P. High pressure Fire Box.
 - 1-40 H.P. High pressure Fire Box.
 - 2-25 H.P. 43x55, new Vertical, 125 lb. pressure.
 - 1-15 H.P. 36x33 new Vertical, 100-lb. pressure.
 - 1-10 H.P. 30x33 new Vertical, 100-lb. pressure.

- STEAM ENGINES**
- 1-26x48 Viller left hand Corliss engine.
 - 1-17x34 x 48 Hamilton, Cross Compound, heavy duty, Corliss, designed for rope drive.
 - 1-22x42 Hamilton heavy duty Corliss.
 - 1-22x42 Allis heavy duty Corliss.
 - 3-18x36 Allis-Chalmers heavy duty Corliss.
 - 1-16x16 Lane & Bodley Slide Valve.
 - 1-14x16 Erie City Iron Works Automatic.
 - 1-13x16 Erie City Iron Works Automatic.
 - 1-13x16 Chandler & Taylor Slide Valve.
 - 2-10x12 Valley Iron Works Automatic.
 - 1-10x12 Chandler & Taylor Slide Valve.
 - 1-9x12 Skinner Automatic.
- Also many other sizes.

- MOTOR GENERATOR SETS**
- 2-500 K.W. Westinghouse, 250 volt D. C. 730-hp, 3 phase, 60 cycle, 2300 volt, Synchronous Motor Generator Sets.
- ROTARY CONVERTERS**
- 2-300 K.W. Westinghouse, 250 volts, D. C., 3 phase, 60 cycle, Rotary Converters.

A. C. MOTORS

No.	H.P.	Make	Volts	R.P.M.
12	7½	New General Electric	220	1800
6	10	New General Electric	220	1200
2	15	New Fairbanks-Morse	440	1750
5	15	New General Electric	220	1200
1	20	Used Fairbanks-Morse	230	1200
5	20	New General Electric	220	1200
5	25	New General Electric	220	1200
1	25	New G. E. (Slip Ring)	220	1200
3	30	New General Electric	220	1200
4	40	New General Electric	220	1200
4	50	New General Electric	220	900
1	50	Rebuilt General Electric	220	900
3	50	New G. E. (Slip Ring)	440	900
3	75	New G. E. (Slip Ring)	220	900
3	100	New G. E. (Slip Ring)	220	900
1	100	Rebuilt Westinghouse	220	1200
2	150	New G. E. (Slip Ring)	440	720
1	200	Used General Electric	2300	514
1	250	New Allis-Chalmers (Slip Ring)	2200	514
1	275	Used G. E. (Slip Ring)	240	600
1	960	New G. E. Synchronous	550	720

Also many other sizes and types.
Any of the above 220 volts motors can be furnished for 440 volts, or vice versa.

D. C. MOTORS

No.	H.P.	Make	Volts	R.P.M.
1	50	Rebuilt Allis-Chalmers	250	800
1	40	Rebuilt Jants & Leist	250	800
3	30	Used Jants & Leist	250	600
1	20	Rebuilt Triumph	250	965
1	15	Rebuilt Minneapolis	110	350
1	12½	Rebuilt Minneapolis	220	950
1	7½	Rebuilt Jants & Leist	220	800
2	5	Rebuilt Triumph	220	1350
1	5	Rebuilt Jants & Leist	230	900
2	4	Rebuilt Triumph	110	1025

Also many other sizes and types

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125 v. Crocker-Wheeler Generator, direct connected to 8 x 9 Fleming Harrisburg, horizontal, slide crank, automatic engine, complete with rheostat for back of board. Operated 6 months. Price \$450 cars Phila.

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One Gas Power Generating Outfit consisting of R.D. Wood Gas Producer, Westinghouse vertical Producer Gas Engine and 150 K.W. 125-250 V. Westinghouse D.C. Generator. Detail specification and price on application. Immediate delivery.

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Right and left hand 16x36" Nordberg, Heavy Duty, type DD frame, 27"x13" drive wheel, self oiling system. Only slightly used. Good price for quick sale.

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- 1-B. & W., 284 H.P. Water Tube; 150 lbs. pres.
- 1-Erie City, 250 H.P. Water Tube; 150 lbs. pres.
- 14-72" x 18" Horizontal Tubular; 125 lbs. pressure.
- 2-46" x 20" Horizontal Tubular; 115 lbs. pressure.
- 1-72" x 16" Horizontal Tubular; 115 lbs. pressure.
- 1-100 H.P. Locomotive Fire Box; 100 lbs. pressure.
- 1-50 H.P. Locomotive Fire Box; 90 lbs. pressure.
- 1-50 H.P. Internally Fired; 90 lbs. pressure.
- 1-30 Vertical; 110 lbs. pressure.
- 1-20 H.P. Vertical; 100 lbs. pressure.

ENGINES

- 1-28" x 48" Hamilton Right Hand Corliss.
- 1-20" x 42" Ohio Right Hand Corliss.
- 1-18" x 42" Allis Right Hand Corliss.
- 1-12" x 24" Buckeye Left Hand.
- 1-12" x 24" Douglas Plain Slide Valve.
- 1-10" x 12" Chandler Taylor Plain Slide Valve.
- 1-9" x 10" Armstrong & Simms Automatic.

PUMPS

- 1-16" x 8 1/2" x 12" Duplex Steam.
- 1-14" x 10 1/2" x 10" Duplex Steam.
- 1-12" x 7" x 10" Duplex Steam.
- 1-10" x 6" x 10" Duplex Steam.
- 1-8" x 4" x 8" Duplex Steam.
- 4-5 1/2" x 3 1/2" x 5" Duplex Steam.
- 2-4 1/2" x 3 1/2" x 4" Duplex Steam.
- 1-8" x 8" Deane Triplex Single Acting Power Pump.
- 1-Kingsford Horizontal Centrifugal Water Pump. 24" suction, 24" discharge.
- 1-Plate Iron Works Horizontal Centrifugal Water pump, 14" suction, 12" discharge.
- 1-Fulton Horizontal Centrifugal Water Pump. 12" suction, 10" discharge.

AIR COMPRESSORS

- 1-Sullivan Straight Line Air Compressor, 34" steam cylinder, 26" low pressure air cylinder, 16 1/2" high pressure air cylinder, 30" stroke, capacity 1850 cu. ft. per minute.
- 1-Laidlow-Dunn & Gordon Belt Driven Air Compressor, size 25" x 15" x 18", capacity 1750 cu. ft.
- 1-Chicago Pneumatic Single Stage Steam Driven Compressor, two cylinders, size 22" x 16"; capacity 1700 cu. ft.
- 1-Laidlow-Dunn & Gordon Belt Driven Air Compressor, size 25" x 15" x 18"; capacity 750 cu. ft.
- 1-Ingersoll-Sergeant High Pressure Steam Driven Air Compressor, two stage, low pressure cylinder 18" x 12", high pressure cylinder 12" x 12"; capacity 400 cu. ft.
- 1-Clayton Duplex Steam Driven Air Compressor, duplex steam and two stage air cylinders, dial steam cylinder 10", low pressure air cylinder 14 1/2", high pressure air cylinder 16", stroke 10"; capacity 425 cu. ft.
- 1-Chicago Pneumatic Fuel Oil Driven Compressor; capacity 300 cu. ft., 100 lbs. pressure.
- 1-New York Air Brake Co. Locomotive Type Two Stage Air Compressor, 10" low pressure cylinder, 8" high pressure cylinder, 8" stroke, 7" steam cylinders.

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- 25-30,000 Gal. Vertical, Storage.
- 20-10,000 " horizontal, storage.
- 15-5,500 " " "
- 10-2,000 " " "
- 25-1,000 " " "
- 25-500 " ver. or horizontal storage.
- 50-Complete Underground Gasoline Storage Tanks, consisting of 160 gal. galv. tank, 14 gauge material, bearing Underwriters' label, with hand pump, also pipe and fittings complete.
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- 25-22 in. by 54 in., 150 lbs. pressure.
- 20-20 in. by 8 1/2 ft. to 9 1/2 ft., 150 lbs. pres.
- 10-16 in. by 42 in., 150 lbs. pressure.

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- 4—Allen Sensitive Drills, 6 spindles.
- 100—Punch Presses, assorted sizes—Single and Double Acting; weighing from 1000 to 41,000 lbs. each.
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- No. 5 Mitts & Morrill Keyseater
- 1-5" bar (5 1/2" feed) Cement Niles & Co. Quick Change Feed, Horizontal Milling, Drilling and Boring Machine; compound table working surface 9"x17"; 8" cross feed; 7" 6" longitudinal feed; also circular power feed; vert. adj. of 4' 6"; dist. bet. heads 14"; Power feeds in all directions.
- 1-8" Sellers Vert. Boring Mill—two swivel heads
- 60—Niles Vertical Car Wheel Borer.
- 20—Newton Slotter, circular table.
- No. 17 Besly D.E. Disc Grinder.
- No. 1 Besly D.E. Disc Grinder.
- 13 1/2"x35" Landis Universal Grinder.
- 3 1/2"x28" Pond Triangular Turret.
- 3x36" Pratt & Whitney Hollow Hex Turret.
- 38"x6" Ingersoll Slab Grinder.
- 30x12"x12" Type A Gooler & Edmund Miller.
- 200 lb. Beaudry Champion Belt Driven Hammer.
- 60 lb. Bellefonte Belt Driven Hammers (3).
- 14" Schugart and Schutte Tooth Rounding Machine.
- 16" Rockford Borer.
- 8" Eaton Cole & Burnham Pipe Machine.
- 48x48"x16" Pond Planer—3 heads.
- 30x30"x2" Putnam Planer.
- 26 1/2"x26" Hendey Planer.

BOILERS

- 300 H.P. Manning Vert. 150 lb. steam (3).
- 225 H.P. Heine 170 lb. steam.
- 100 H.P. Erie City Economic 125 lb. steam.

AND MANY OTHERS

ENGINES

- 47 Corliss, Automatic, Slide Valve, Vertical and Horizontal, most any size.

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- 152 Steam and Belt Driven, every size for any duty.

Special

Ingersoll-Rand Imperial No. 10 Duplex Self Oiling Dry Vacuum Pump, Type XPV4, Compound Steam Cylinder, High Pressure 3x10", Low 15x14", Duplex Water Cooled Air Cylinders, 27x14", Fly wheel 63x11", 4" rim. Pump practically new, with Automatic Regulator. Approx. Wt. 30,000 lbs. 7" suction, 7" discharge.

AIR COMPRESSORS

- 22 Steam and Belt Driven in capacities from 30 to 2400 Cu. Ft. per minute.

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- 40 Belt and Motor Driven All sizes up to 8".

Special

No. 6 1/2 Root Positive Pressure, built for maximum pressure of 5 lbs. or less; direct connected to 150 H.P. Westinghouse Variable Speed Motor, 220 Volt, 150 to 250 R.P.M. With Switchboard complete with Automatic Speed and Pressure Regulator.

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All sizes, open and closed types, up to and including 1000 H.P.

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Special Low Price on

- (3)—50 H.P. Allis Chalmers, 3 phase, 60 cycle, 440-220 volt, 865 R.P.M.
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25 CYCLE MOTORS

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- 1-40 HP, 750 RPM, 3 Ph, 440 V. F.M. slip-ring.
- 1-40 HP, 750 RPM, 3 Ph, 220 V. G.E.
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Ranging in size from 1/4" by .0187" to 15" by .250", in various grades, dimensions and thicknesses.

7,250,000 lbs. of Unused **STEEL BOILER TUBES**, in 24 lots; namely, No. 12 Standard; No. 13 Hot Rolled; No. 14 Swelled on One End; No. 15 Swelled on Both Ends; Nos. 16, 17, 21, 25 and 26, Seamless (Plain, Bent and for Yarrow Boilers); Nos. 18, 19 and 20, Stay (Plain and Swelled on Both Ends); No. 32 for Donkey Boilers; No. 33 for Super Heaters; No. 34 for Oil Coolers.

Ranging in size from 1/2" by .035" by 23 to 4" by .236" by 90, in various grades, dimensions and thicknesses.

Materials are located at Naval Depots on the Atlantic and Pacific Seacoasts. Bids will be considered on any (1) lot, or (2) lots, or on all lots located on (3) the Atlantic, or (4) Pacific Coast, or on (5) all lots without reference to location.

Write or wire for descriptive Cat. No. 145-B, giving detailed locations, quantities, sizes, and terms of sale, to any of the following, who will also arrange for inspection:

Supply Officers at Navy Yards:
Boston, Mass. Norfolk, Va.
Philadelphia, Pa. New York, N. Y.
Puget Sound, Wash. Mare Island, Calif.

Naval Training Station,
Great Lakes, Ill.

Board of Survey, Appraisal and Sale,
Naval Supply Depot,
S. Brooklyn, N. Y.

Bids on this sale must be in the form given in the above Cat. No. 145-B. Bids should be plainly marked and addressed to the undersigned, where they will be publicly opened at 11:00 A. M., Wednesday, November 22, 1922.

U. S. NAVY
CENTRAL SALES OFFICE
Navy Yard Washington, D. C.

HOISTS DERRICKS

ELECTRIC HOIST AND DERRICK \$1600

PRICES F. O. B. CARS, HOG ISLAND, PA.

You Save at Least \$2000

These Hoists and Derricks are standard late models, manufactured by The American Hoist & Derrick Co., St. Paul, Minn. They are almost new, and every one is **GUARANTEED** to be in first-class running order.

The Hoists have two drums and swingers, and are complete with Starting and Control Equipment. Either side or bank control, and rated 6000 pounds single line on each hoisting drum. Slewing rope 36 ft. per minute, and hoisting rope speed 160 ft. per minute. The **MOTORS** are Otis 37 H.P. A.C., 60 cycle, 3 phase, 440 volt, slip-ring induction type and, if desired, may be changed to suit the individual current requirements of purchasers at cost.

DIMENSIONS OF DERRICKS

Mast.....16 in. square, 40 ft. high.
Boom..... Made of (2) 14 in. sq. timber 48 ft. long spliced to lengths of 80 ft. with (2) $\frac{3}{4}$ in. and (2) $1\frac{1}{4}$ in. truss rods.
Stiff Legs. 14 in. sq., 55 and 60 ft. long, or 16 in. sq. 50 ft. long, will furnish either length desired, capacity 5 to 10 tons. Bull wheel 16 ft. dia. Principal sheaves 16 in. dia. and 14 in. single blocks.
The Cable which was formerly used will be given with each purchase of a Hoist and Derrick.

These Hoists and Derricks are assembled on the Grounds at Hog Island and may be inspected at any time. This Equipment is being sold complete and in units of a Hoist or Derrick if desired. Immediate shipment can be made anywhere, but **QUICK ACTION IS IMPERATIVE.**

Wire, Phone or Write for Detailed Information, Folder, Etc.

THE ELECTRIC HOIST & DERRICK CO.
RECORDS BUILDING, HOG ISLAND, PA.

1-42" and 54" J. A. Fay Band Rip Saw. 1-54" Gilbert Band Resaw.
1-Glen Cove 8" 4-side Matcher. 1-Preble 10" 4-side Matcher.
1-J. B. Hoyt 14" 4-side Matcher. 1-24" 3-drum Berlin Sander.
1-30" 2-drum Fay. 1-28 x 12 Double Surfacers, endless bed type.
1-18" Circular Resaw—power feed. 1-30" Circular Resaw—power feed.
MOULDERS:
1-7" 3-side Houston. 1-7" 4-side Fay.
1-9" 4-side Williamsport. 1-7" 3-side Hamilton.
Boilers, Hoists, Pumps, Engines, Ironworking Machinery, Belting, Shafting, Pulleys, Hangers.

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A Real Opportunity
NEW STRUCTURAL STEEL—SLIGHTLY RUSTED—NOT PITTED
500 tons 6" $12\frac{1}{4}$ lb. I-Beams 15' 0" long
400 tons 5" $9\frac{3}{4}$ lb. I-Beams 9' 0" long
500 tons 4" $7\frac{1}{2}$ lb. I-Beams 12' 0" long
Exceptionally low price before removal.
Located New Cumberland, Pa.

HENRY A. HITNER'S SONS CO.
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PUMPING UNIT, CONDENSER, SUPERHEATER, ETC.
One pumping unit made up of two slow speed 6" double suction pumps, capacity of each pump 825 GPM; pumps direct connected to 8x8 Troy fully enclosed, self-oiling, throttling engine located on one base plate between the two pumps. Pumps are designed to work against a 35' head and to run 360 RPM. Equipment manufactured by Lawrence Pump & Engine Co.; Lawrence, Mass.
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Necessary spray nozzles, gauges, valves, pipe and fittings for installation of No. 34 Schutte & Koerting Multi-Jet Condenser.
One Fig. 1405—12" Cochrane Multiport Horizontal Atmospheric Release Valve.
One direct fired Foster Superheater, will raise the temperature of 3500 pounds steam per hour at a working pressure of 100 pounds to 600 degrees Fahrenheit, final temperature, corresponding to a superheat of 263 degrees.

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40 New Scranton Size 6 x $5\frac{3}{4}$ x 6

Price \$150 Each

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10—19 x 8 Le Blond double back geared,
quick change, belt driven

Price \$500 Each

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BALTIMORE, MD.

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IMMEDIATE DELIVERY FROM STOCK

BLACK PIPE $\frac{1}{4}$ " to 20"GALV. PIPE $\frac{1}{4}$ " to 8"

Cast Iron Bell and Spigot Fittings, Valves and Hydrants

Cast Iron, Malleable and Brass Screwed Fittings

Cast Iron and Steel Flanged Fittings and Valves

Brass Valves

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25th & Morris Sts. **Chas. J. Grant Supply Co.** Philadelphia Pa.**FOR SALE****PIPE SECOND HAND All Sizes $\frac{1}{8}$ " to 24"**

Furnished with new threads and couplings, suitable for every practical purpose.
Also large assortment of Contractors' Equipment, Hoisting Engines, Boilers, Concrete Mixers, etc.; all thoroughly overhauled.

MARINE METAL & SUPPLY CO.

167 South Street

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**ALL SIZES SECOND-HAND
FOR ALL PURPOSES
FRANK GRIFFITH**

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Philadelphia, Pa.

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Have just purchased from the Government the following Black and Galvanized Pipe (NEW).

17,000 ft. $1\frac{1}{2}$ "; 33,000 ft. 2"; 64,000 ft. $2\frac{3}{4}$ "; 49,000 ft. 3"; 85,000 ft. $3\frac{1}{2}$ "; 30,000 ft. 4"; 10,000 ft. $4\frac{1}{2}$ "; 11,000 ft. 5"; 12,000 ft. 6"; 19,000 ft. 7"; 20,000 ft. 8"; 5,000 ft. 9"; 10,000 ft. 10"; 12,000 ft. 12";

Can furnish random lengths or cut to sketch. Price low for immediate shipment.

WE ALSO HAVE 4,000 tons of Flanged and Screwed Fittings and Valves from $\frac{1}{4}$ " to 26", and invite your inquiries covering same.

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NEW - EQUIPMENT - BARGAINS**KERR TURBINE ENGINES**

2500 H.P. 3600 RPM
2650 H.P. 3600 RPM
3000 H.P. 3600 RPM

TURBINE STEAM PUMPS

20 H.P. Non-condensing 3600 RPM
5 H.P. Direct Connected 2500 RPM

BOILERS

25 H.P. Vertical
80 H.P. Locomotive A.S.M.E.
80 H.P. Return Tubular A.S.M.E.
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PUMPS

10x12x12 Worthington Horizontal Duplex
7x8x10 Deane Vertical Duplex
10x6x18 National Transit Vertical Simplex
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MISCELLANEOUS

100-Ton Hydraulic Bending & Straightening Press
Angle Bending Machine
Channel & Angle Flanging Machine
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Hisey Grinders—3 H.P. Motors—3 Phase—60 Cycle—440 Volts—Second-hand.

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PIPE**PIPE FOR SALE****PIPE**

15 miles 8" 28 pound line pipe 60c. foot; 5 miles 6" line pipe 40c. foot; 300,000 feet 1" pipe 4c. foot; all f.o.b. cars Beaumont, Texas.

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HENRY A. KRIES & SONS CO.

Steam and Mill Supplies, Pipe Fittings, Complete Power Plant Equipment, Manufacturers and Machinists, Refrigerating Engineers and Contractors.

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THROTTLING GOVERNOR ENGINES

(Horizontal)

12"x18" Atlas Side Crank70 H.P.
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6"x 8" Taylor Self Contained...10 H.P.

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(Vertical)

9"x12" New York Safety30 H.P.
9"x 9" Troy Enclosed Type35 H.P.
7"x 9" New York Safety20 H.P.
6— 7"x 7" American Blower NEW, enclosed type20 H.P.
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Satisfaction Guaranteed or Money Refunded.

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IRON AND STEEL PIPE

Large quantity Pipe, with threads and couplings, used in Government plant a short time.

Rods—100 tons 7/8" Round Rods, 14' to 22' lengths.

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Owing to the present shortage of pipe we are pleased to advise that we have just purchased from the Government 1800 tons of Black and Galvanized new random length pipe from 2" to 12" which we can offer at attractive prices for immediate shipment.

To those who can use $3\frac{1}{2}$ " Black or Galvanized Pipe please be advised that we can give a very substantial discount on same. Will ship plain end, flanged or screwed.

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Pipe, all sizes, bought and sold. What sizes are you in the market for? What sizes have you for sale?

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HENRY PRENTISS & CO.
Incorporated
149 Broadway New York, N. Y.
Warehouse: Jersey City

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IMMEDIATE SHIPMENT

30" dia. x 4' 1 1/4" long	85 Gal.	120" dia. x 14' 5" long	8500 Gal.
37" dia. x 4' 1 1/4" long	120 Gal.	120" dia. x 16' 11" long	10000 Gal.
42" dia. x 4' 1 1/4" long	280 Gal.	120" dia. x 20' 3" long	12000 Gal.
52" dia. x 5' 1 1/4" long	550 Gal.	120" dia. x 25' 3" long	15000 Gal.
58" dia. x 6' 0" long	800 Gal.	120" dia. x 31' 1" long	18000 Gal.
58" dia. x 7' 6 1/2" long	1000 Gal.	120" dia. x 33' 7" long	20000 Gal.
65" dia. x 5' 1 1/4" long	1000 Gal.	120" dia. x 39' 5" long	23500 Gal.
64" dia. x 9' 1 1/4" long	1500 Gal.	120" dia. x 41' 11" long	25000 Gal.
68" dia. x 10' 8 1/2" long	2000 Gal.	96" dia. x 16' 3" long	6000 Gal.
68" dia. x 13' 1 1/4" long	3000 Gal.	96" dia. x 24' 3" long	9000 Gal.
78" dia. x 10' 3 1/4" long	4000 Gal.	96" dia. x 27' 0" long	10000 Gal.
84" dia. x 17' 7 1/4" long	5000 Gal.	96" dia. x 32' 3" long	12000 Gal.
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- 1-35 Ton McMyler Standard Gauge, 70' Boom, DD, 2 Weeks Delivery.
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- 1-1955 Cu. Ft. Steam Driven Ingersoll-Rand Air Compressor. Available for immediate inspection and shipment from Philadelphia.

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- 1-13x18 American Saddle Tank, 50 Ton Locomotive Machine, completely rebuilt and in first-class condition. Boiler completely retubed, new tires, new flues, etc.

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- 1-Marion 21 Steam Shovel mounted on full cater-

CRANES

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- 1-Marion 21 Steam Shovel, Caterpillar Traction, 3/4 yd. Dipper, 15' Dipper Stick, No. 4280. Excellent condition.

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- 1-Osgood 18 Steam Shovel Traction Crane 3/4 Yd. Dipper. Also 30' Steel Boom, as Crane Shop No. 472.

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Steam & Electric COMPRESSORS of all sizes.

Hoisting Engines
Derricks
Locomotive Cranes
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Orange Peel and Clam Shell Buckets
Motors, Generator, and Refrigerator Unit
Steam and Electric Shovels.

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- 4-100,000 cap. flat bottom gondolas.
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- 2-10x16 cyl. 36 in. ga. saddle tanks.

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Rails, Track Material, Steam Shovels, Tanks.

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Marion 31 & 21 Caterpillar Tractions
Many other sizes and makes.

Austin & Kelly—Springfield Road
Rollers

12 & 10 ton 3 wheel, Steam & Gas.

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Several sizes and makes, Steam & Gas.

All bargain prices.

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300 flat cars, standard gauge, 36 to 40 ft. capacity 40,000, 50,000, 60,000 and 80,000 lbs.
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15 box cars, standard gauge, 36 ft., 50,000 lbs. capacity.

All equipped with air and hand brakes.

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LOCOMOTIVES

5 to 100 Tons in weight, Narrow and Standard Gauge—Rod and Geared.

ALL TYPES—FOR ALL CLASSES OF SERVICE.

Have over 50 REBUILT and ready for shipment

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- 1—Thew O. $\frac{5}{8}$ yd. on Traction Wheels.
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125—65,000 lb. Capacity Box Cars—Rebuilt.
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RELAYING RAILS

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3 miles 25 lb. section, North Carolina delivery
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Type.....\$4,000
STROUDSBURG 25 H.P. D.D. HOIST, boiler 700
RUSSELL STEAM TRACTOR 25 H.P. 500
All in good operating condition.

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TRENCH EXCAVATOR

PARSONS MODEL "36" New Machine

Will dig to maximum depths of 9, 12 or 15 feet as may be desired.

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One McMyler 35 ton type J. Bucket Handling Locomotive Crane, 8 wheel M.C.B. 50 ft. Boom. Will furnish with either a lap joint or A. S. M. E. boiler.

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- 1—No. 5 Austin Gyrotory Crusher, equipped with smooth manganese head and concaves. In excellent condition, together with 24 ft. elevator. Located at Gaffney, S. C.
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- 1—31 ft. belt driven Smith Mixer, with extra drum, located at Spartanburg, S. C. In good condition.
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1—7" x 10" 3-Drum D.C. Stroudsburg skeleton Hoisting Engine complete with Swinging Gear attached, good as new.
300-ft. of 24" gauge Portable track, 12 lb. Rail.
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Have 16 lb. and 30 lb. Portable track, Cars, Etc.

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36" Gauge Locomotives

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- 1—Vulcan 10x14" 14 ton four wheel saddle tank.
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Send for specifications and prices.
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- 1—10 Ton Industrial four-Wheel Locomotive Crane.

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MERRIMAN ASPHALT PLANT

We have for sale one rebuilt No. 1 Merriman 2000 yard One-Car Steam Melting Asphalt Plant. It is in fine condition and we can make good delivery.

Here's your chance to get a real asphalt plant at a price that is right. Better get in touch with us quickly.

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It takes more current to start a car than to keep it moving.

By using "CINCINNATI" Parallel Throw Switch Stand, a motor operator can throw switches in passing, thereby doing away with numerous switching stops.

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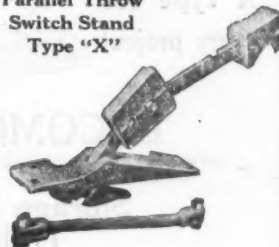
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Locomotives, Steam Shovels, Locomotive Cranes, Cars,
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WE HAVE FOR SALE

40 Standard and 36" Gauge Modern Direct-connected Locomotives, in all types and weights from 8 to 75 tons.
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15 Steam Shovels and Locomotive Cranes of different types and sizes.
2000 tons Relaying Rails, all sizes; on our Birmingham yards.
100 sets 35 and 40-lb. Frogs and Switches; good as new.

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Manufacturers

FROGS, SWITCHES, CROSSINGS, Etc.

HENRY H. BABER

NEW and RELAY RAILS

Logging Equipment, Track Materials and Supplies

LOCOMOTIVES, CARS, STEAM SHOVELS and CRANES

Dickson Building - - - NORFOLK, VA.

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Manufacturers of

Frogs, Switches, Crossings, Rail Braces, etc.

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Manufacturers of Balkwill Articulated Cast Manganese Crossings

EQUIPMENT FOR SALE

1-Austin Gasoline Road Roller, 10 Ton. Good order\$1500.00
1-Gallon Iron Gravel Screening Plant. Good as new \$850.00

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RAILS NEW & RELAYING ALL WEIGHTS

Let us know your needs. We may have material in stock near you.

WE BUY RAILS FIT TO RE-LAY
Robinson & Orr Pittsburgh, Pa.
New Frogs and Switches at low prices.

RELAYING RAILS

30,000 feet—90 lbs. per yard
22,500 feet—80 lbs. per yard
14,000 feet—70 lbs. per yard
With necessary angle bars.
Steam Shovels—Locomotives—Cars—Railway and Contractors Equipment.

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LOCOMOTIVE CRANES FOR SALE

1-Browning 15-ton 8-wheel 46 ft. boom, double drums.
2-Browning 4-wheel electrically operated.
2-Industrial 15-ton 8-wheel.
1-Industrial 7½-ton 4-wheel.

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50 Church Street - - - New York

NEW RAILS RELAY

650 Tons 56-Lb. Rail
150 Tons 35-Lb. Rail

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506 First Nat'l Bank Bldg., Houston, Texas

RAILS

Complete stock 16 lb. to 100 lb. sections

Prompt shipment
Write—Wire or Telephone

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LOCOMOTIVE CRANE

1—25-ton, 8-wheel Industrial Type H, built 1918, A.S.M.E. boiler, 50-ft. boom, double drums, thoroughly overhauled. Excellent condition.

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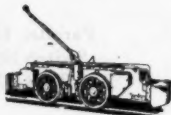
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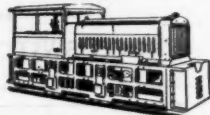
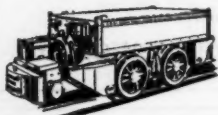


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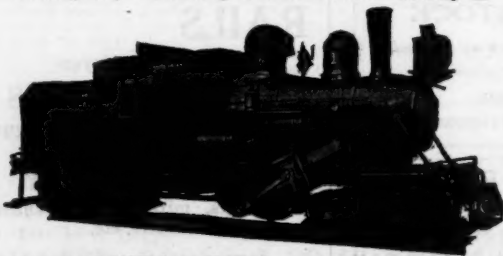
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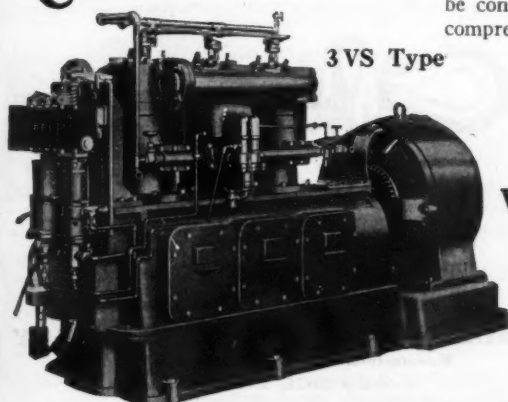


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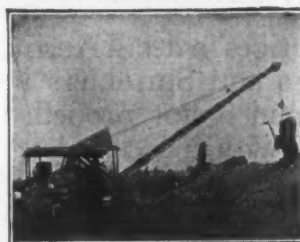
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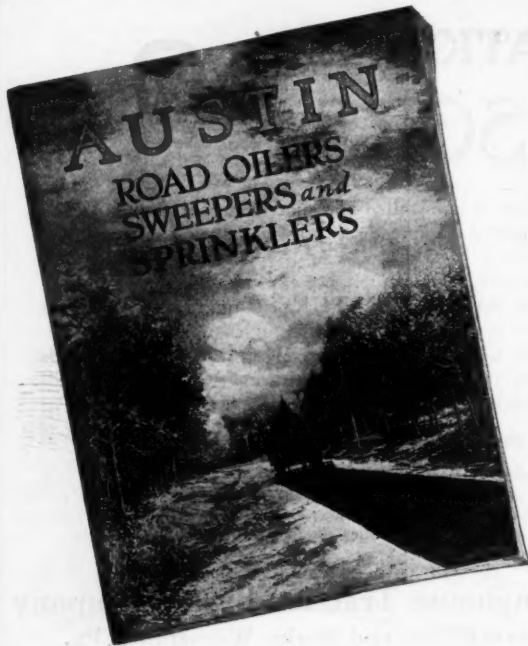
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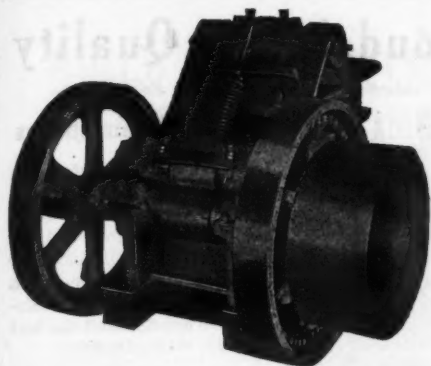
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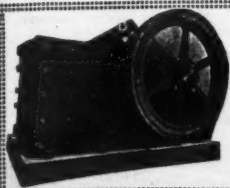
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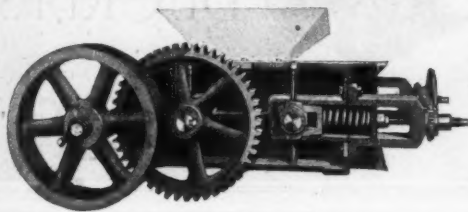
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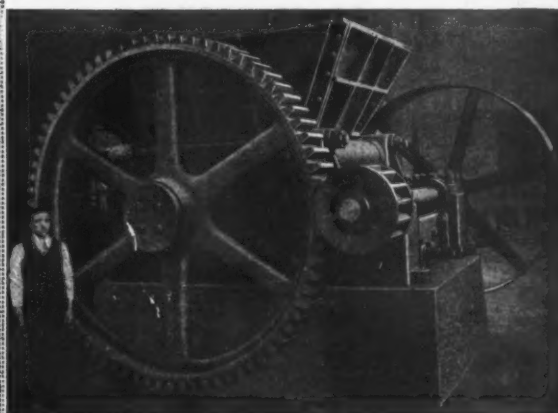
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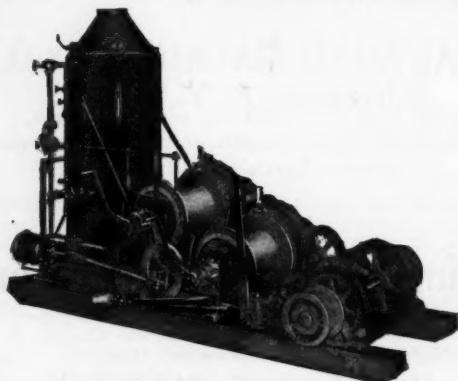
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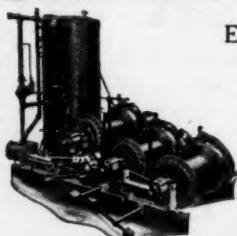
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Manufacturers of

High Grade Portland Cement



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Our Motto

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~and when Caesar had landed he began to construct roads

Staunch foemen, these war-like Britons. So eager for battle that they rushed into the water to their waists that they might repulse the Roman invaders before they could set foot upon their sacred soil. So fierce did Caesar find them, that on his first expedition he was forced to turn back without landing.

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Today, as then, the welfare of a nation is largely dependent on its highways.

Later years have shown us that the perfect material for road construction is concrete, reinforced with National Steel Fabric, which supplies the tensile strength which the former lacks.

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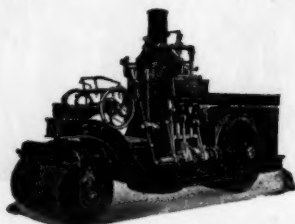
We take this method of notifying infringers of the Ashmore and Morgan patent and process granted July 16, 1918, that we will protect our patent rights and prosecute infringers. A decision rendered by the United States Circuit Court of Appeals, Fifth Circuit, New Orleans, La., February 24, 1922, holds our patent valid in every respect. The roller we manufacture is the simplest, best and most economical means for finishing concrete pavements.



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Tandem
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Rollers
for
**STRENGTH
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ECONOMY of OPERATION and LONG LIFE

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ERIE MACHINE SHOPS

ERIE, PENNA., U. S. A.



for concrete roads,
curbs, gutters, and
sidewalks.

Very simple; a rail,
a pedestal, a stake
—that's all. Used
by leading contractors.
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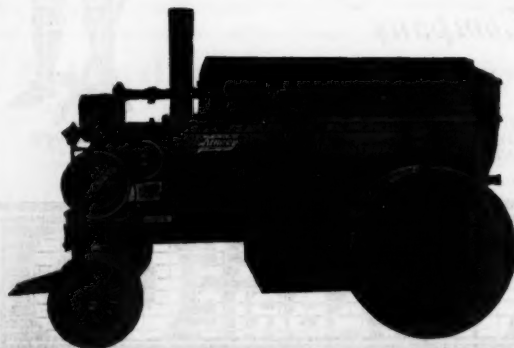


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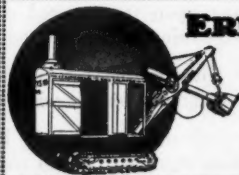
Especially adapted for road maintenance, construction and general repair work. Contents constantly agitated while heating.

No burning or coking of material. Pump, Piping, Hose and Nozzles Automatically Heated.

No Steam Required.



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Boston, Mass.

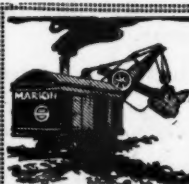


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For road grading; handling road materials with clamshell bucket; cellar and trench excavation; excavating sand and gravel, etc. We will be glad to send photos and data, showing just what the ERIE Shovel is doing on these classes of work.

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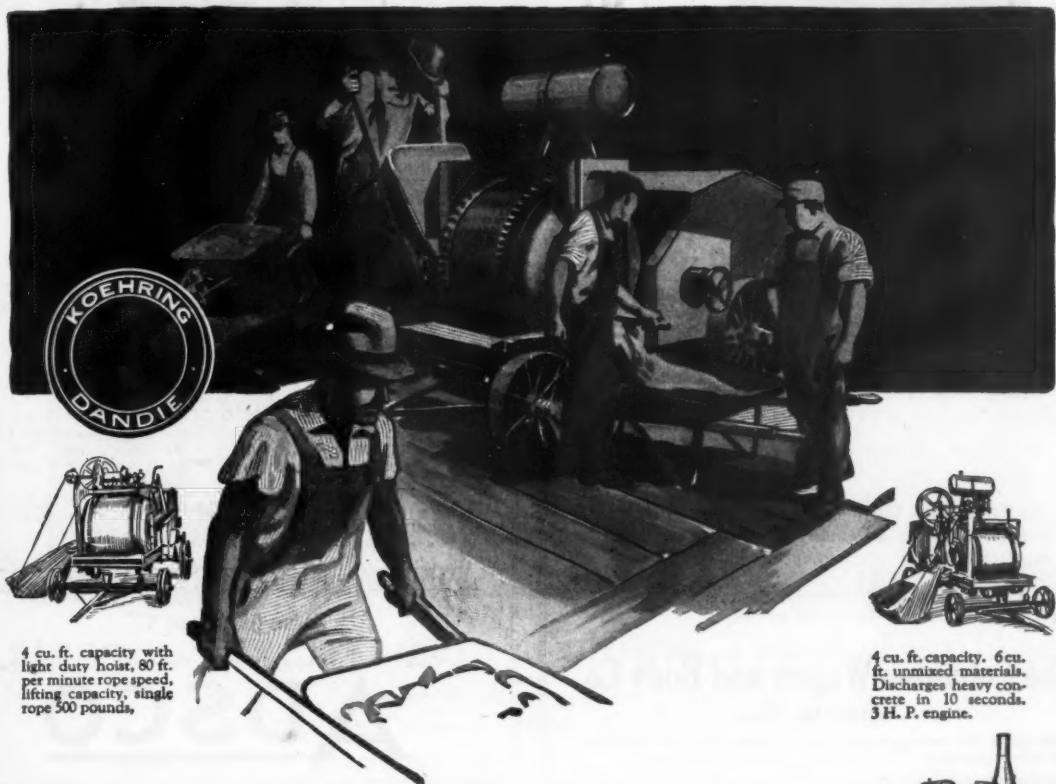
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All Types and Sizes

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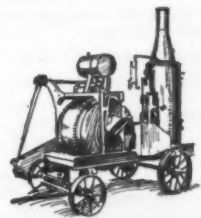
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A light, easily portable mixer for footings, culverts, foundations, etc. Mixes concrete or mortar. As splendidly engineered as the big Koehring Paving Mixers. Great strength without excess weight! Double drum gear drive. Universal joint bearings. The

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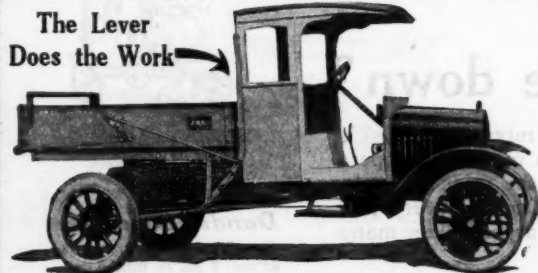
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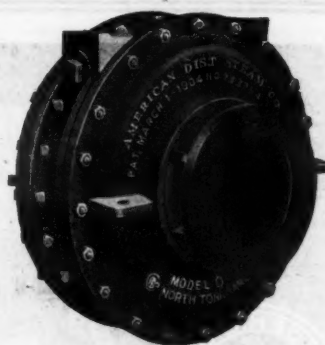
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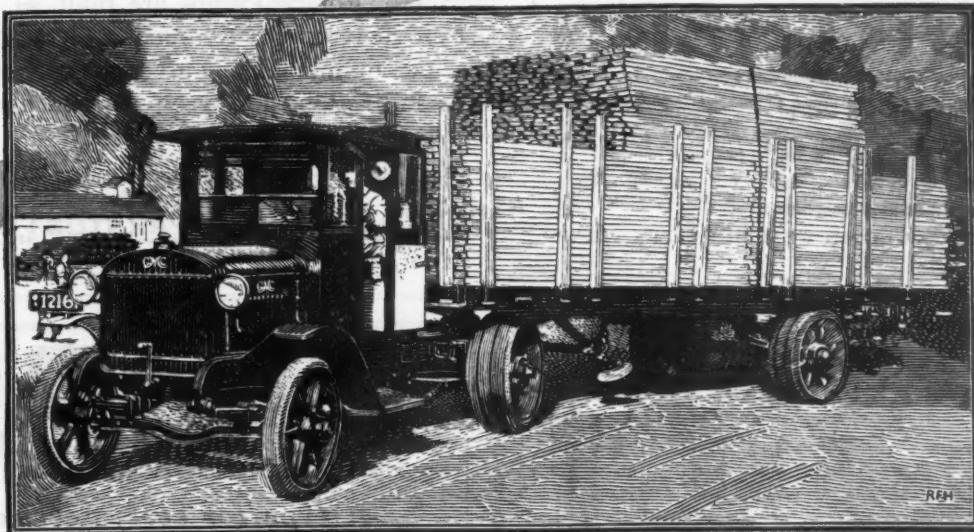
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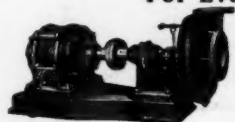


Fig. 267
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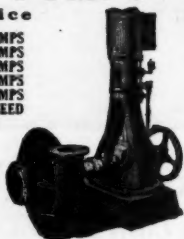


Fig. 239
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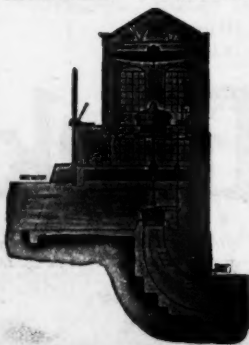
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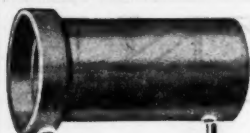
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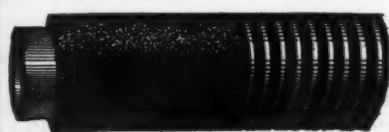
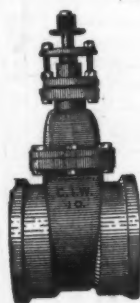
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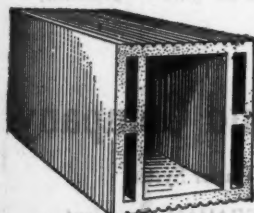
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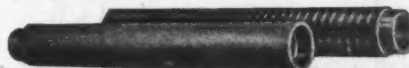
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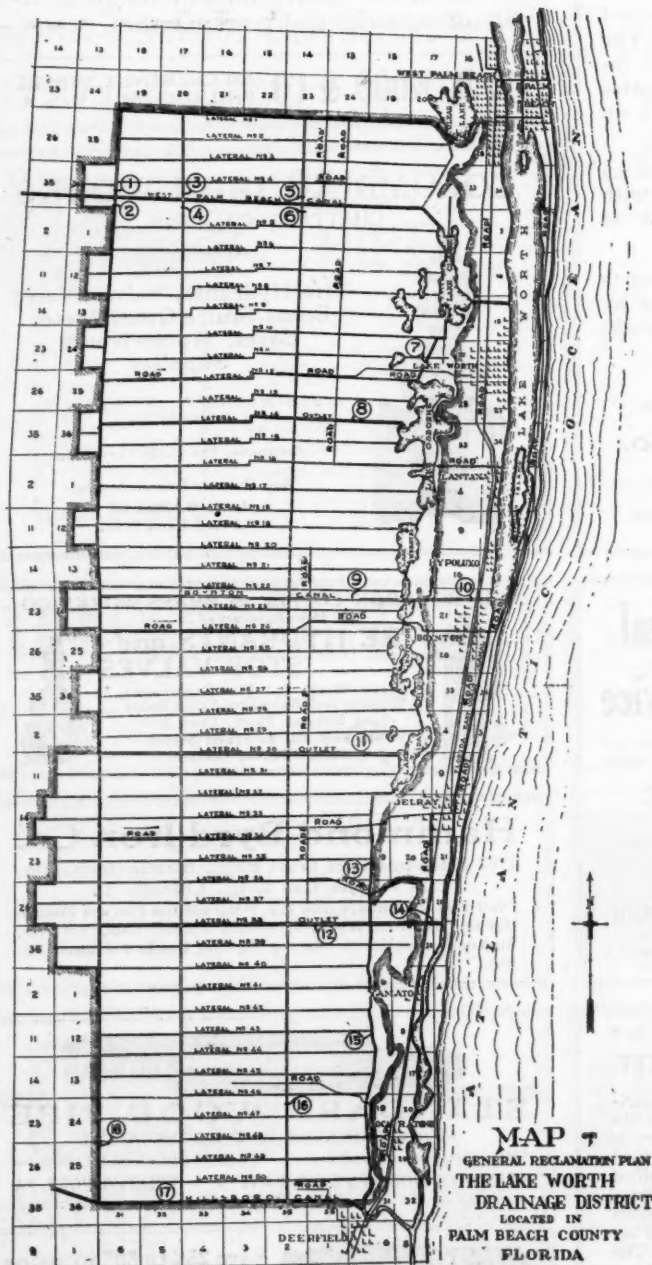
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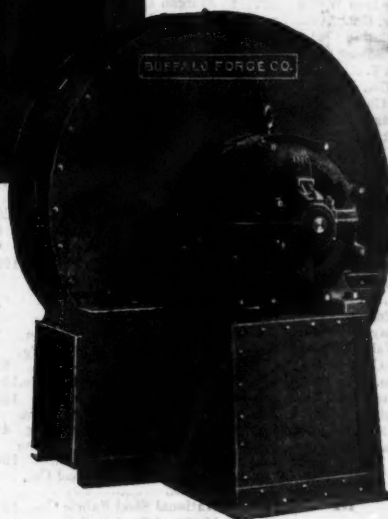
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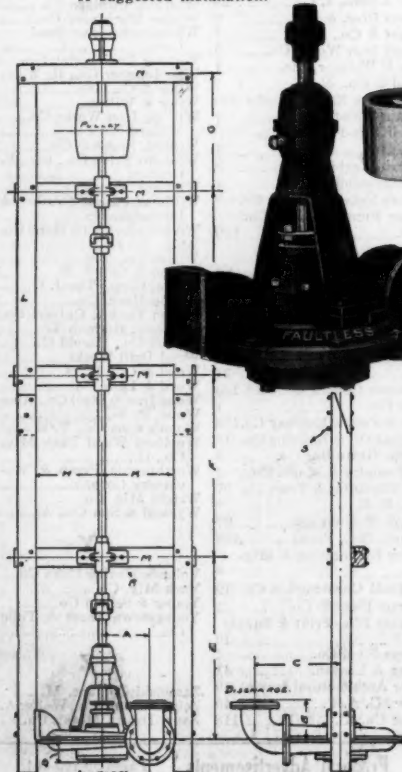
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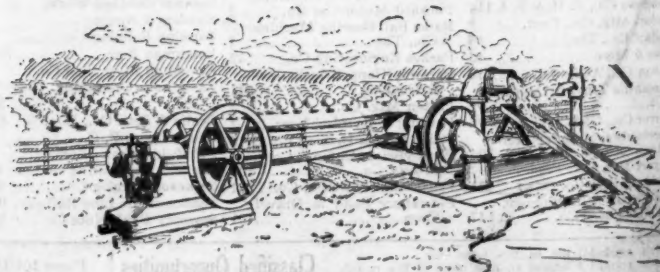
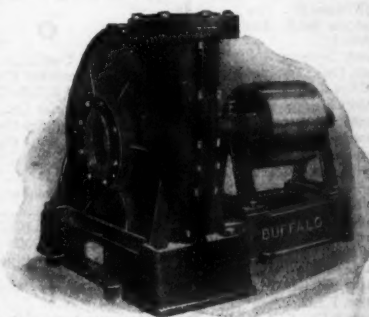
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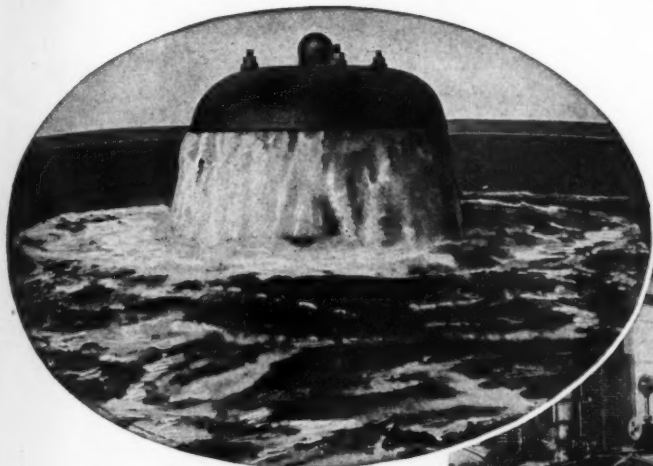
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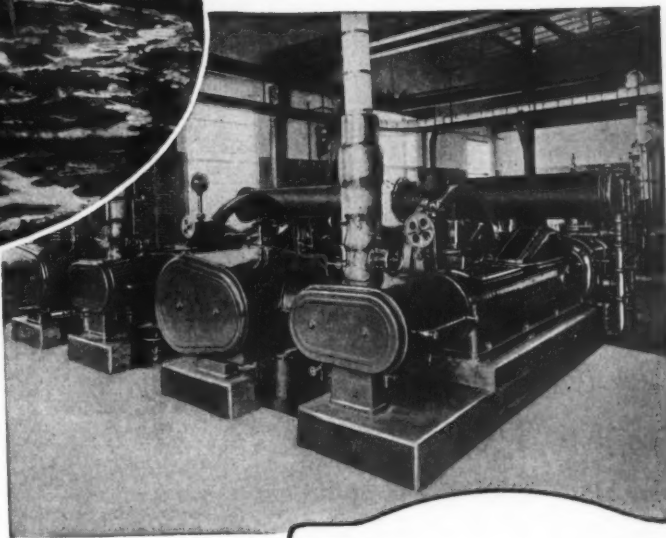


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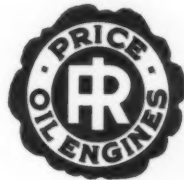


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